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Fortune

One Dollar a Copy

APRIL 1930

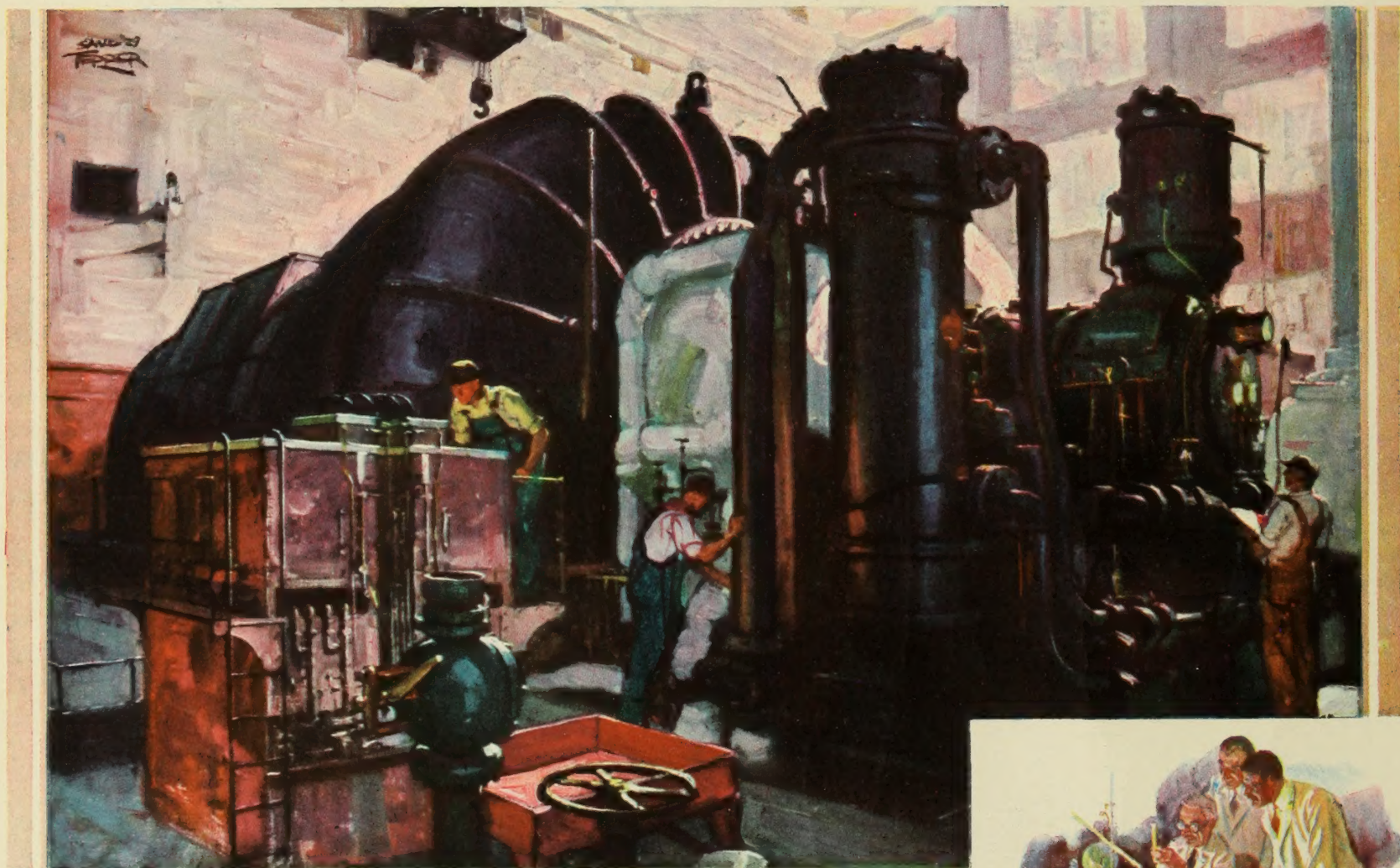
Ten Dollars a Year

169628





Tiny Wheels, Giant Turbines Run Smoother on TEXACO



IN every branch of industry, in the nation's steel mills, mines and manufacturing plants there are power plants—high-speed, time and labor saving machines whose very life is dependent on oil!

Texaco Lubricants plus Texaco Lubrication Service have gone hand in hand to save millions for the industries of the world. There is no industrial lubricating problem too complicated for Texaco; there is no type of machinery made, from the sewing

machine in the home to the giant turbine generating power for the electrical needs of an entire city, which is not being lubricated effectively by Texaco.

There is a Texaco Lubricant for every purpose. Throughout the world—everywhere the Texaco Red Star with the Green T is known and respected.

THE TEXAS COMPANY
*Refiners of a complete line of Texaco Petroleum Products including Gasoline,
Motor Oil, Industrial Lubricants, Railroad and Marine Lubricants,
Farm Lubricants, Road Asphalts and Asphalt Roofing.*

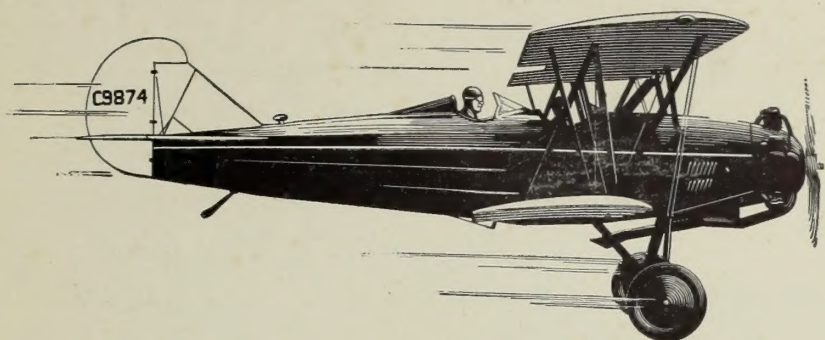


RESEARCH . . . THE GUIDE TO PROGRESS
Anticipating every development; insuring ever higher standards of quality . . . Texaco Laboratories are the source of Texaco progress.



TEXACO

The mark of quality for petroleum products



DAD'S FIRST FLIGHT

I CIRCLED the house before settling the Travel Air on the lower lawn and as usual, Dad watched from the steps.

Once down, Gwen sprang out without my help. "Dad's always on hand, isn't he?" she asked as we walked toward him.

"Never misses a take-off or landing," I answered, "even though I've ceased to be a novelty to everyone else."

Gwen's next question was simple enough, but it stopped me. When she asked, "Has he ever been up?" what could I say? Neighbors, schoolmates, even the gardener had been passengers. But Dad, never. He didn't seem the type. But I've found you can't predict just who is going to be sky ambitious and who isn't.

"Dad," I said, when we approached, "Isn't it about time you and I went up to look at a few silver linings?"

"Well, son," he smiled, "if you hadn't invited me I was just about to take her off the ground myself."

We lost no time. Gwen's helmet and an overcoat were his flying clothes. We were over the elms in a twinkling. Dad was having the time of his life. Whenever I looked around he wore the same rapt expression. I took my hands from the controls—held them over my head to show the plane's automatic stability. Then back we came to the lawn in a slow glide. Dad's face was all aglow. "Wonderful experience," he said, "Never felt so big or so small before."

And he keeps getting keener! Air minded? He's positively air hungry. Why, this afternoon after we flew from the club, he said, "Say, don't you think it would be sportier if we changed the 165 engine to a 225?"

Sportsmen penetrate the wilds in their Travel Airs. In commercial flying, Travel Airs daily ply their way over mail, transport and business corporation routes. They constitute a major proportion of all commercial planes in service in the United States. And in distance and speed contests these planes capture firsts with a regularity that is almost monotonous. Full particulars about Travel Air ships, their construction and performance for commercial, industrial and private flying, will be gladly sent you. Write Department T-1.

TRAVEL AIR COMPANY

Division of CURTISS-WRIGHT

Sales Offices: 27 West 57th Street, New York

A PLANE FOR EVERY PURPOSE



The Travel Air open cockpit biplane is Wright Whirlwind powered at either 165 or 225 H. P.; High speed, 165 H. P. Engine, 122 m. p. h.—High speed, 225 H. P. Engine, 132 m. p. h. Every Travel Air Airplane is entitled to full Curtiss-Wright day and night service at more than 40 bases throughout the continent

TRAVEL AIR →

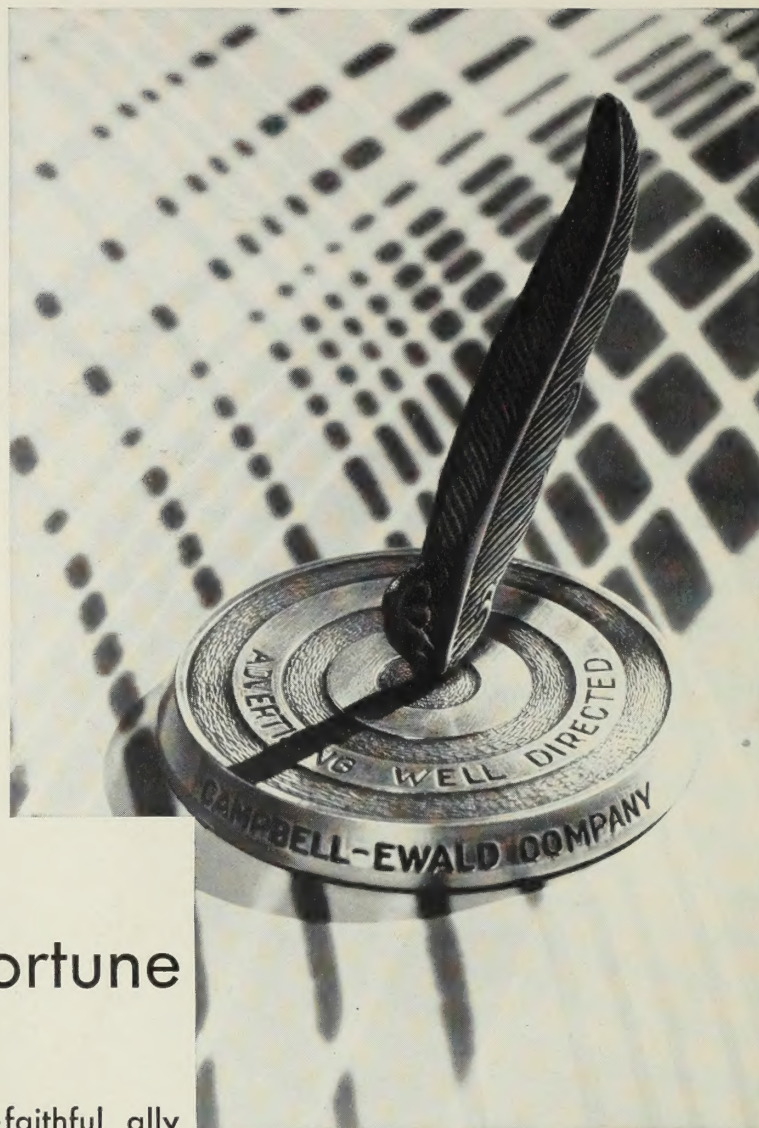
Establish a set of rules. Say, "Business must be run this way."

Then sit back and watch some newcomer to big business,

a man who possesses energy and imagination, cast your

rules to the winds, win spectacular success and create a

new fortune. This very thing has happened countless times



..there is no one formula for fortune

And there is no single formula for effective advertising—faithful ally

of modern industry. The most successful campaigns often result from a complete disregard of established

precedent. Again, imagination plays the leading role—imagination governed by good business judgment

and a thorough groundwork of advertising fundamentals. That is why the executives of the Campbell-Ewald

Company do not attempt to apply any one method or formula to all advertising problems. It is their be-

lief that the best advertising can be produced only through specialized knowledge of the individual case,

and intelligent application of the principles of advertising by men who have both imagination and

experience. The soundness of this practice is best illustrated by careful study of the type of advertis-

ing which is helping to build success for

clients of the Campbell-Ewald Company.



CAMPBELL-EWALD COMPANY

advertising well directed H. T. Ewald, President . . . Offices in Detroit, New York, Chicago, Seattle, Los Angeles, Portland, San Francisco, Paris, France; Sydney, Australia; In Canada—Campbell-Ewald Limited; Toronto; Montreal.

IMAGINATIONS QUICKEN

IN THE MEN WHO LOOK UPON THIS SCENE

ALWAYS IT'S BEEN
SO... AND ALWAYS
IT WILL BE.....

Year after year, since the first golden nugget was found, men have come out of the east and the north and the south to test the promise of the Golden West... to learn the secret of its city by the Golden Gate.

Month after month new thousands are coming; some for the simple pleasure that living here holds, others—alert, seeing the future—bent on its fair reward...

And the city foreseen by those first men is the city San Francisco has come to be. Close beneath her fabled hills a fascinating harbor has grown to rank second in the United States in value of waterborne tonnage. Three great trans-continental railroads compete to serve her people... and 11,000,000 people living west of the Rocky Mountains, who are served from San Francisco more quickly and cheaply than from any other city. San Francisco centers the most concentrated population in the West. (Half the people of California live within a radius of one hundred and fifty miles). Situated in the midst of unlimited natural resources, it is not astonishing that this city should be headquarters



SAN FRANCISCO
IN CALIFORNIA—"WHERE LIFE IS BETTER"

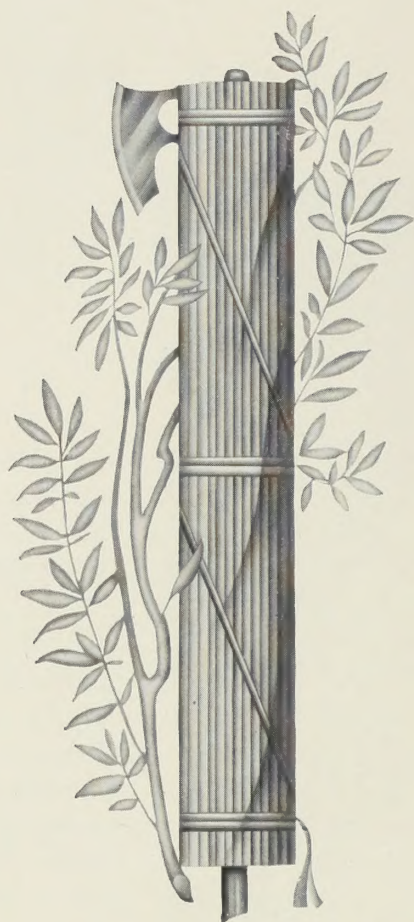
for the leading financial, railroad, shipping, lumber, manufacturing and distributing interests of the whole Pacific Coast.

But imaginations quicken in the men who work and play in California's sun. 900,000,000 people in the lands bordering the Pacific are fast developing new, modern desires and San Francisco is the natural gateway for the commerce that will go to satisfy these wants. As surely as it leads the West today, this city's leadership will be extended in the great Pacific Era that is coming.

Plan now to spend this year's vacation in the brilliant out-door-land that San Francisco centers. You'll find a choice of half a hundred famous places, high in quiet mountains or down beside the sea—and always, this thought-provoking city close at hand.

Californians Inc. want to tell you more about San Francisco and the California that it centers—where thousands who come to visit, return again to live! Send your name and address for two worth-while illustrated books: "Why Manufacturers Choose San Francisco" and "California Vacations."

Address Californians Inc., Department 2204, 703 Market Street, San Francisco.

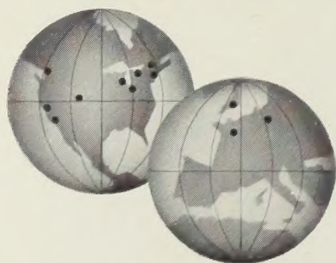


FASCISTI ALL!

The bundle of rods which is on the United States ten cent piece; the red strapped fasces that lay over the left shoulder of the Roman Lictor; the name of the Italian Fascisti—all these signs and names say strength is in union. You can break a stick—but not a bundle of sticks. *ℳ* This is the kind of strength acquired by an advertising agency of many offices, of many experienced men and women, of many accounts widely diversified. It is a strength of unified judgment, emanating from long and world-wide business experience.

THE H. K. McCann Company

ADVERTISING



NEW YORK
DENVER
MONTREAL

CLEVELAND
SEATTLE
LONDON

CHICAGO
LOS ANGELES
PARIS

SAN FRANCISCO
TORONTO
FRANKFORT, O. M.





ENDURANCE

JUST as the Camel is the only animal to withstand the gruelling travel through desert heat, day-after-day, over burning sands beneath a blistering sun, so is the Firestone Supreme Balloon the one tire which has demonstrated its outstanding endurance in conquering adverse conditions on all kinds of roads, in all kinds of weather on all makes of cars. + The extra tough and thick safety tread, the extra strong cord construction, Gum-Dipped by the Firestone exclusive process which insulates every fiber of every cord against heat and friction, greatest enemies of long tire life—combine to insure tire performance beyond anything ever before known. + Let the Firestone Dealer equip your car now with these greatest of tires, choice of discriminating motorists everywhere.

Firestone

Supreme Balloon

LISTEN TO THE "VOICE OF FIRESTONE" EVERY MONDAY NIGHT BROADCAST THROUGH FIFTY STATIONS. N. B. C. NETWORK.



THE START OF THE BOATING SEASON

. . . when yachts head north and
northern yachts go in commission



The 48' Dawn cruiser,
equipped with twin Sterling
Petrels, medium speed, 145
H.P., 1500 R.P.M., exceeding
20 M.P.H. Sterling equipped
because of Dawn preference
and public demand for this
remarkable engine.

THE marine industry is expanding. Boat yards and engine plants
are increasing facilities to meet the demand for yachts and
engines. An addition to the Sterling plant is in process of erec-
tion, and we hope to make all deliveries without delay. You are
respectfully urged to decide quickly, giving the boat and engine
builders reasonable opportunity to provide for materials and a
place in the erecting schedule.

STERLING ENGINE COMPANY BUFFALO, N.Y., U.S.A.

ENGINES OF 12 TO 565 H.P.



That Better Fruits and Vegetables may be grown Profitably

NICOTINE SULPHATE and other nicotine and tobacco derivatives are invaluable in both agriculture and animal husbandry.

The building layout and special equipment of the Tobacco By-Products & Chemical Corporation at Louisville, Ky., afford an excellent illustration of a modern chemical process plant designed and built to meet specific process requirements.

This compact, modern and efficient plant was designed by us through the coordinated work of seven departments and then erected under our supervision.

It is but one illustration of the varied character of the industrial engineering problems we have handled in more than a quarter century.

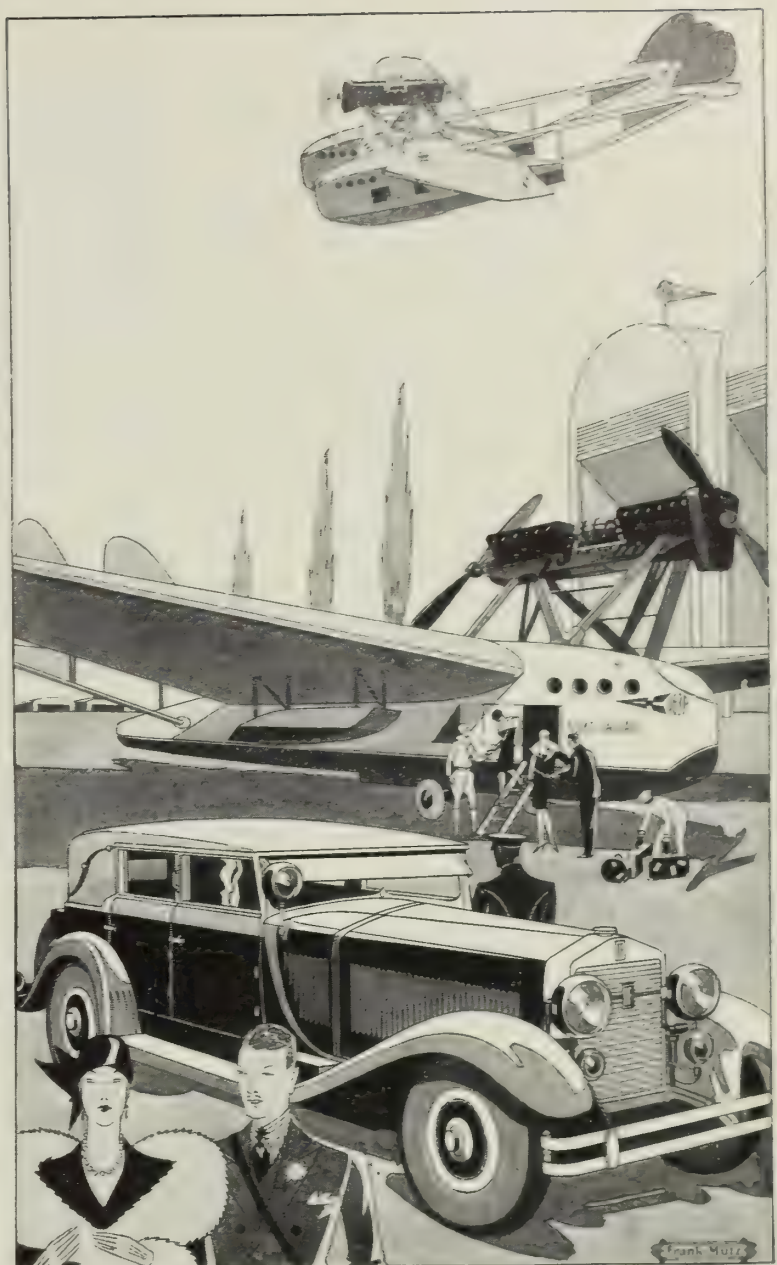
To confer with us on a project you have in mind is to make available the accumulated experience of an engineering organization so departmentalized that every phase of your problem will receive the attention of experts.

J. E. SIRRINE & COMPANY

Engineers

Greenville

South Carolina



*Amphibians, powered by Isotta-Fraschini.
Courtesy of American Aeronautical Corporation*

Continuing the Thrill

EVEN though you have become "air minded," even though you may own a stableful of other fine cars, you simply can't get blasé about the spirited Isotta Fraschini straight-eight.

Clip all the superlative advertisements about motor cars you have read, place them end to end, and they will still not measure up to your reaction to an **actual ride** in this car—through traffic where you can sense the toe-touch brake response and far out along the open road where you can unleash all of its 140 mighty horsepower.

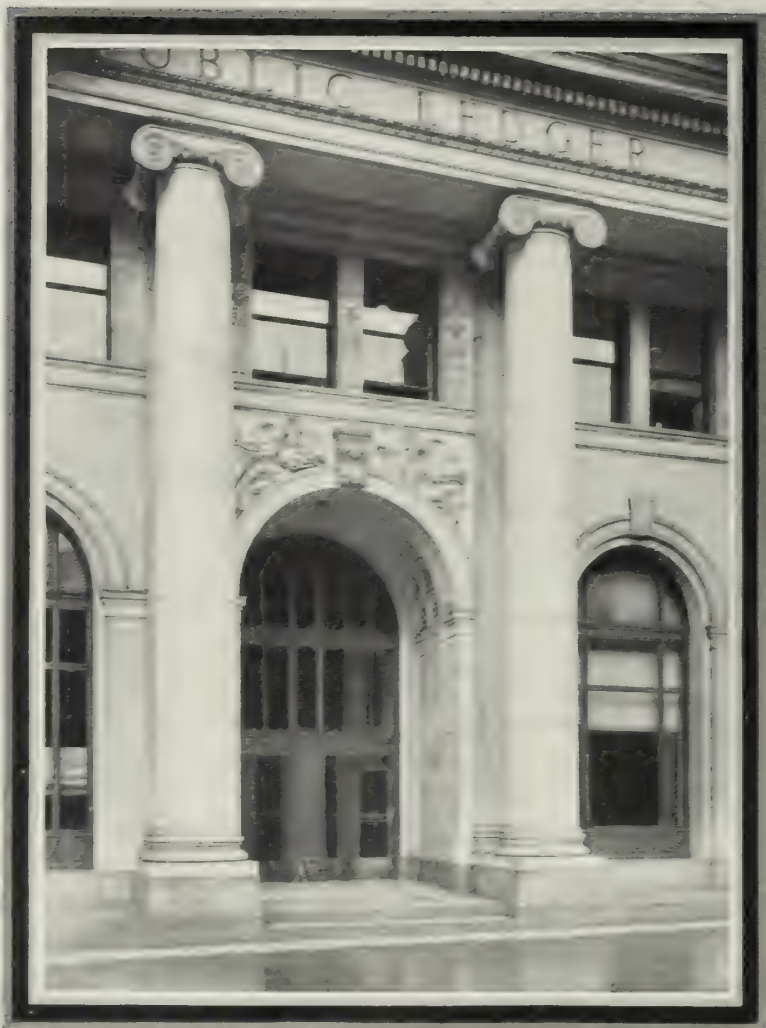
ISOTTA FRASCHINI

MADE IN MILAN, ITALY

ISOTTA MOTORS, Inc.

NEW YORK: 119 West 57 • • • CHICAGO: 846 Rush

*All
that is beautiful
shall abide forever*



THERE can be no more fitting tribute to the worth and permanence of the service rendered by a great institution such as the Public Ledger of Philadelphia than to house its many departments in a building in which Vermont Marble has been effectively used. In all parts of the country, leading architects have specified Vermont Marble for banks, schools, libraries, municipal buildings, and great public service institutions . . . Vermont Marble can be used in *your* community to pay just tribute to the vision of those who guide the destinies of such financial, educational, and civic enterprises.

We shall be glad to send you illustrative material, showing how architects have used Vermont Marble in the design of great institutions as well as for buildings of more modest size.

Public and family memorials to many of the great names in the history of America perpetuate, in the everlasting beauty and dignity of Vermont Marble, the memory which is so indelibly engraved in the hearts and minds of their countrymen. And in making their choice of materials that would endure for unmeasured time, the architects and engineers who built the famous Arlington Memorial Amphi-


theatre and Unknown Soldier's Tomb chose Vermont Marble, *the nation's memory stone*.

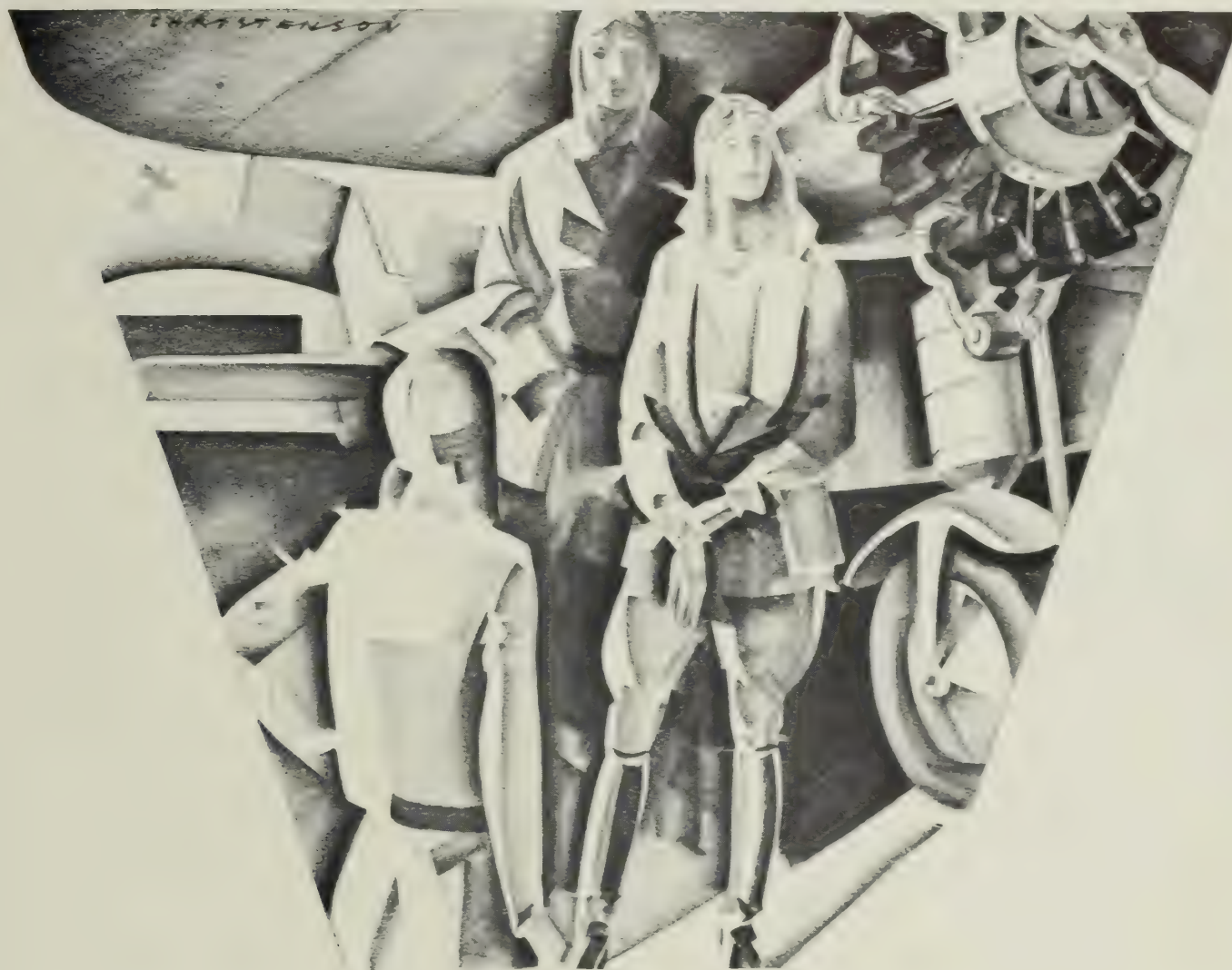
Write for our booklet, "All That is Beautiful Shall Abide Forever" . . . It gives helpful information on the problem of selecting appropriate memorial designs. Our Department of Plan and Design will gladly co-operate with a Master Craftsman in Marble in your vicinity, without obligation, in submitting sketches and estimates for your memorial requirements. Address: Dept. F 302, Vermont Marble Company (*the world's largest quarriers of marble*), Proctor, Vermont.



In addition to the distinctive beauty of Vermont Marble is its resistance to the wearing effects of climatic conditions. Of these, the most destructive during the course of the centuries is moisture. Bulletins of the governmental Bureau of Standards show that monumental grades of Vermont Marble absorb only about one-tenth as much water as the average of other memorial stones . . . Vermont Marble is impervious and everlasting.



VERMONT  MARBLE



A

Have you ever worn a flying suit?
Among the fascinating new ones
shown by Marshall Field & Company
is the cleverest little invention you ever
saw . . . as feminine as curls, but much less
bother. Nothing so adorable should be
called efficient, but it's admirably fitted for its
purpose. Thus it expresses perfectly the bright,
modern spirit of every costume in the new Sports
Apparel Room at Field's. Each is so exactly right,

SPORTS-EYE VIEW OF FASHION

and flattering, and fashionable, that
one can think only of the short
French word for smartness to describe it.



All the different, delightful clothes to fly, drive,
ride, swim, play tennis, sail, golf, shoot, ski, or
skate in are exceptionally well represented in the
Sports Apparel Room. Here, too, is shown a com-
plete selection of those charming necessities, "spec-
tator" frocks and ensembles. You are invited to
visit this tremendously enlarged section at Field's.

MARSHALL FIELD
AND COMPANY
RETAIL • CHICAGO



Off the Record

The suit business

THE highly profitable business of Mr. Clarence H. Venner is undoubtedly unique. And for that, every big corporation in the land is duly grateful.

It would be unkind to intimate that Mr. Venner has a "racket." Mr. Venner is in the suit business. He has been in it since 1886. He opens shop as soon as he discovers that a corporation is planning to reorganize, sell bonds, merge, or perform any other important corporate action, and he does not close shop until he has collected. His first step is to buy one hundred shares or so of the corporation's stock—unless, as often is the case, he already has some tucked away. Established as a minority stockholder, he then investigates, carefully, patiently, microscopically, the proposed plan and the reasons given therefor. He also casts a speculative eye on the company's charter and articles of incorporation. Nor does he neglect to peer into state corporation statutes. Time was when Mr. Venner did all this himself, but now, aging and prospering, he is believed to keep a large office force busy thumbing over statutes and charters. The object of all this thumbing is to turn up as large a crop of objections to the plan as possible. The objections may be technical or general, fundamental or superficial—as long as they offer some foothold for legal action.

His next step is to write to the directors of the company protesting strongly against the plan, perhaps hinting at recourse to the courts. This letter he generally follows up with a printed circular with scare headlines such as:

American Telephone & Telegraph Company
HIGH FINANCE
Stock Speculation and Juggling with Corporate Assets
or
Beware of Bonds
Illegally Guaranteed by
The New York Central Railroad Company

These circulars Mr. Venner proposes to scatter to the four winds of Wall Street. Before so doing, however, he thoughtfully sends printer's proofs to the company. This is the psychological moment. If the company lawyers see fit to settle the matter, Mr. Venner is willing to sell out his stock at a moderate price—moderate, that is, considering the damage that would be done the company at this critical moment if he should launch his public attack on it. If the company does *not* see fit, out go the circulars and in goes Mr. Venner to the courts. Sometimes he sues in his own name, sometimes under the name of one of the sixteen dummy corporations he has organized at one time or another—companies like the General Investment Company and the Continental Securities Company. He sues vigorously and persistently. More than thirty judges passed on the various motions and appeals in his attack on New York's Interborough Rapid Transit Company in 1908. Though he lost prac-

tically every appeal, he came back strong in 1910 and again, still fighting, in 1921. Persistent and energetic as Mr. Venner is, only about 5 per cent of his suits are successful. This does not worry him, however, for the suit itself and not victory is his object.

In the half century during which Mr. Venner has been running his suit business, he has taken on corporations as big as they come. The roster of his lawsuits (for partial list, see Appendix) starts with the Santa Fe railroad in 1886, runs through such sizable companies as United States Steel, Union Pacific, Pullman Company, New York Life, and New York Central to American Hide & Leather in 1925 and General Baking Company in 1928. These are the high lights of his legal battles. They won him from judges such sobriquets as "professional agitator" and "professional privateer." How many cases were settled out of court only Mr. Venner knows. Many of these companies, attacked by a lurid circular, have come out with a less lurid but equally vigorous rejoinder. So unusual a step indicates the calibre of Mr. Venner's attacks. They are often much more than popgun technicalities.

Like all soldiers of fortune, Mr. Venner has had his major campaigns, his rich prizes. The Bethlehem Steel Corporation will not soon forget the filibuster conducted by him at its stockholders meeting in 1917, when he objected to Mr. Schwab taking the chair in the absence of Mr. Grace (and won his point), demanded that the stock books be hunted up and brought into the room (and won), and insisted on messengers being despatched to New York for the stock ledgers (and won). Just what his purpose was remains a mystery. Perhaps it was mere pique: he had tried without success to prevent the meeting from being held. Perhaps he wanted to demonstrate his knowledge of corporation transactions—a knowledge that is probably without an equal in Wall Street. During that campaign he had seven suits going at once against the company. It is reported that a railroad, probably the Union Pacific, paid him \$300,000 in 1900 for some short line bonds worth at par just \$30,000, and in 1904 the Rock Island is said to have paid him \$250,000 for some Nebraska Central stock which an I. C. C. expert appraised at exactly \$000.00. Mr. Venner maintained, however, that the stock had real value, "especially to a large system like the Rock Island."

This defense is characteristic. Far from admitting that he is a professional obstructionist, Mr. Venner has his moments when he sees himself as a protector of property rights, as a Galahad breaking a spear for the great cause of business morality. In an attack on the legality of a New York Central bond guarantee, he delivered himself of these ringing words:

"Ten years ago, had any New Haven stockholder earnestly challenged the legality and integrity of some of the transactions which forced

that Company into its unfortunate predicament and brought such poignant sorrow and distress to so many homes, he would have performed a great public service and earned the everlasting gratitude of those who were dependent for their support upon dividends from New Haven stock, although at the same time incurring the enmity of some financial leaders and their servile followers."

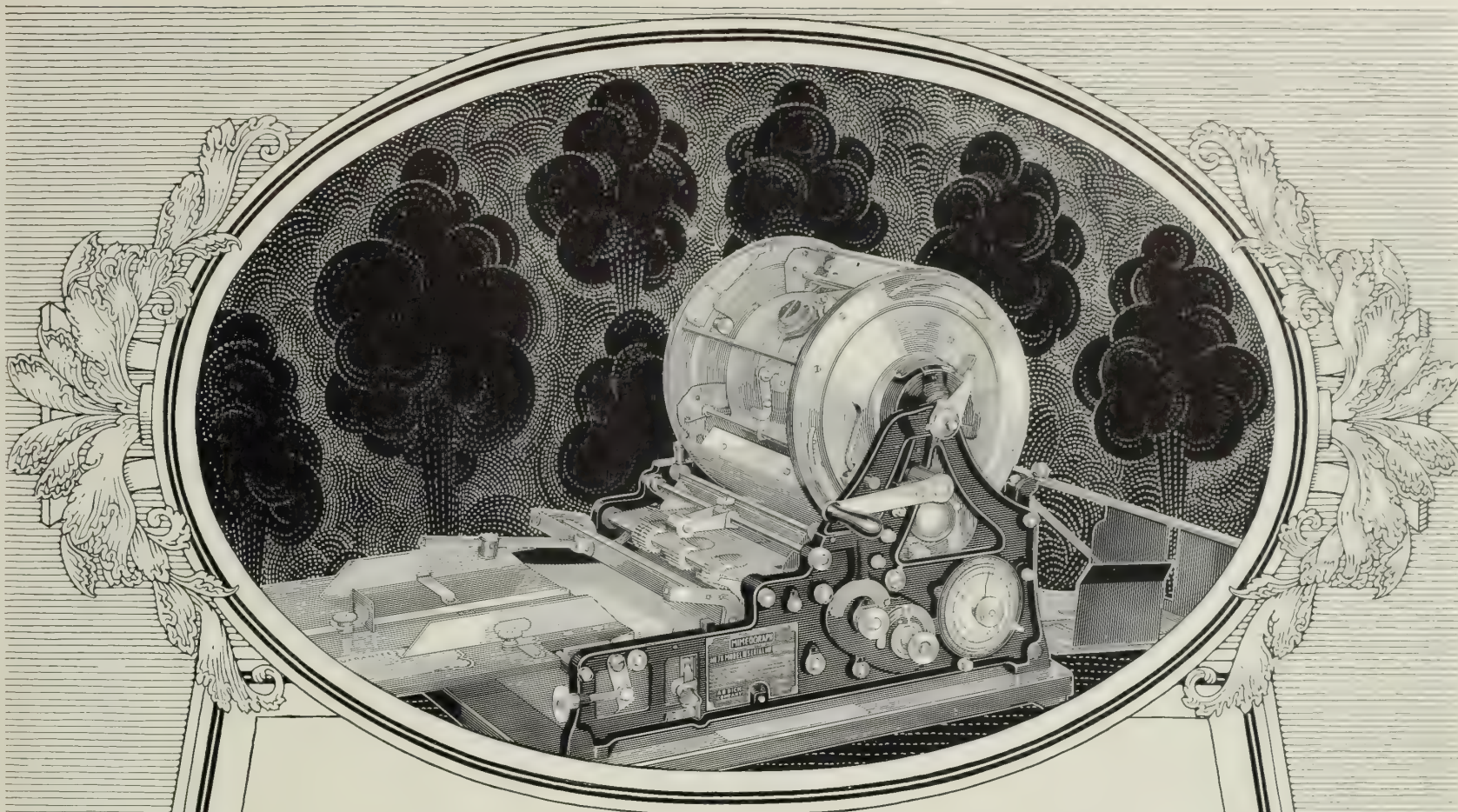
When August Belmont, in one of the I. R. T.'s hearings, tactlessly called Mr. Venner a black-mailer and an extortionist, the champion of morality was outraged. He issued a pink circular in which he stated that Mr. Belmont's "tactics . . . remind one of those animals who unwittingly disclose their whereabouts . . . by filling the atmosphere with a vile odor, directed towards their pursuers." He even began suit against Mr. Belmont for libel, but dropped it nine days after Mr. Belmont obtained a court order for his examination before trial.

Mr. Venner is without doubt a business success. An attorney who once sued him to collect his fee stated that between 1907 and 1913 he had prosecuted actions for Mr. Venner which brought in upward of one million dollars. And the tactless Mr. Belmont, in answering Mr. Venner's libel suit, claimed that James J. Hill paid Mr. Venner between one and two million dollars, at a time when Mr. Venner had already won two actions in a suit against the Great Northern. Even Mr. Belmont could not accuse Mr. Venner of one misdeed: "working" the same company twice. Once he has obtained a settlement from a company, he harasses them no more. This is a point of honor with Mr. Venner, and probably the greatest regret of his career is that he settled with United States Steel way back in 1902.

Mendelian curiosity

PLACE two gamecocks on opposite sides of a knot hole with food and water at their sides; they will starve to death watching each other. Pleased by this sinister parody on the legend of Pyramus and Thisbe, Thomas R. Kimball fifty years ago took to breeding gamecocks. He now has one hundred and fifty of them, each in a separate pen. Because the grounds surrounding his own residence are limited, Mr. Kimball's cock yards in Omaha, Nebraska, are situated behind his brother's house, which is a block away.

Every day Mr. Kimball visits his gamecocks, and almost every day he visits another establishment which is only a few blocks farther away. This is the magnificent Nebraska State Capitol, of which the celebrated late Bertram Goodhue of Manhattan was the designer. As all informed Nebraskans know, Thomas R. Kimball, a former president of the American Institute of Architects, was the professional adviser who selected the architects to compete for the design of the new State Capitol—and to him, therefore,



ALL STEAMED UP

Recent purchases of Mimeographs surely indicate that American business is pushing on at full speed ahead. New and better methods are being used. And in the forward-drive the Mimeograph is serving, with striking results, to cut costs and increase efficiency. Whatever the message, written, typewritten, or drawn, the Mimeograph speedily converts it into exact reproductions, at the rate of thousands every hour. Letters, bulletins, sketches, graphs, illustrated sales-data, tracings, questionnaires, etc., are had rapidly and economically in limitless quantities. The famous Mimeograph stencil sheets, the Mimeotype, and the new Cellotype, make mimeographing available today at less cost than ever before. For the aggressive promotion of business, and the cutting of operating expense, the Mimeograph is a great weapon just now. Write today for full particulars, without obligation, to A. B. Dick Company, Chicago, or to branch offices in principal cities.

M I M E O G R A P H





Gentlemen's Clothes

FOR GOLF

AND COUNTRY WEAR

For the golfer who anticipates the season by selecting correct and comfortable clothes for wear on the links and in the country, we present a comprehensive group of garments in distinguished imported fabrics

Tailored for us by Hickey-Freeman in distinctive models embodying our newer style developments. Accessories for golf wear of quality and individuality

F. R. TRIPLER & CO.

Outfitters to Gentlemen · Established 1886

MADISON AVENUE AT 46 STREET

New York

belongs the credit of having such an architect as Goodhue rather than local talent.

Not long ago the affairs of Thomas R. Kimball reached something of a tangle. The legislators, sitting in the Capitol, began to make a hubbub about Omaha's noise. Mr. Kimball's cock yards, flanked by a maternity hospital and a Christian Science Church, began to be pelted at dawn, when the cocks were crowing, by gin bottles—hurled, presumably, from a row of apartment houses across the street. Presently a tenant in one of the apartment houses complained in court of Mr. Kimball's cocks, describing them as a nuisance which should be immediately abated.

Mr. Kimball could quite easily have moved his gamecocks to pens on one of two farms he owns not far from the city, but this would have deprived him of the pleasure of feeding his birds. He decided that he would carry a defense against the tenant's action to the Supreme Court if necessary. Said he: "An irrepressible Mendelian curiosity early led me to experiment with the only bit of material that I could be automatically sure had not suffered by man's interference. God made the gamecock; a single drop of other blood banishes the game quality forever."

Naturally, Thomas Kimball was aware that in the interior of his State Capitol there are laws filed which forbid gamecocks to be employed in the only way possible. He pointed out that while the enforcement of the prohibition laws is open to debate, the forty-eight states have long deserted any but the most sporadic efforts to enforce the laws prohibiting cockfights, which are now held in pits all over the United States. He pointed out that the measure of the sport, expressed roughly in terms of dollars, could be placed at from \$80,000,000 to \$90,000,000 a year; that the best known cockfight magazine is supposed to have a paid circulation of from 70,000 to 100,000.

White Rock

Robert A. C. Smith, the genial chairman of the White Rock Mineral Springs Company, is on intimate terms with the reporters who throng around the New York City Hall and with Mayor Walker, who works within it. Social, wealthy, and interested in sports, he belongs to some fifteen clubs, including the

New York Yacht, Union League, Seawanhaka-Corinthian Yacht, Turf and Field, Manhattan, and Lawyers'. He is fond of taking his friends to the theatre, provided the play contains a big White Rock scene. His alert assistants engineer White Rock scenes by finding out what plays contain or can be equipped with some highball guzzling. They then offer the producer free White Rock to mix with the stage whiskey (generally cold tea). If they are successful, Mr. Smith takes large and gay parties to the play, nudges his neighbor as the White Rock bottles appear. Sometimes the producer sticks to a siphon bottle as being more "realistic"—a piece of realism that costs him Mr. Smith's patronage. Even poultry cannot escape White Rock in the Smith family. His three sons used to have charge of the chickens in the summer. Noting that the chickens did not thrive, Mr. Smith discovered that they were living on a dry diet. He suggested drinks all around. This suggestion his sons obediently carried out—with White Rock.

Subway legend

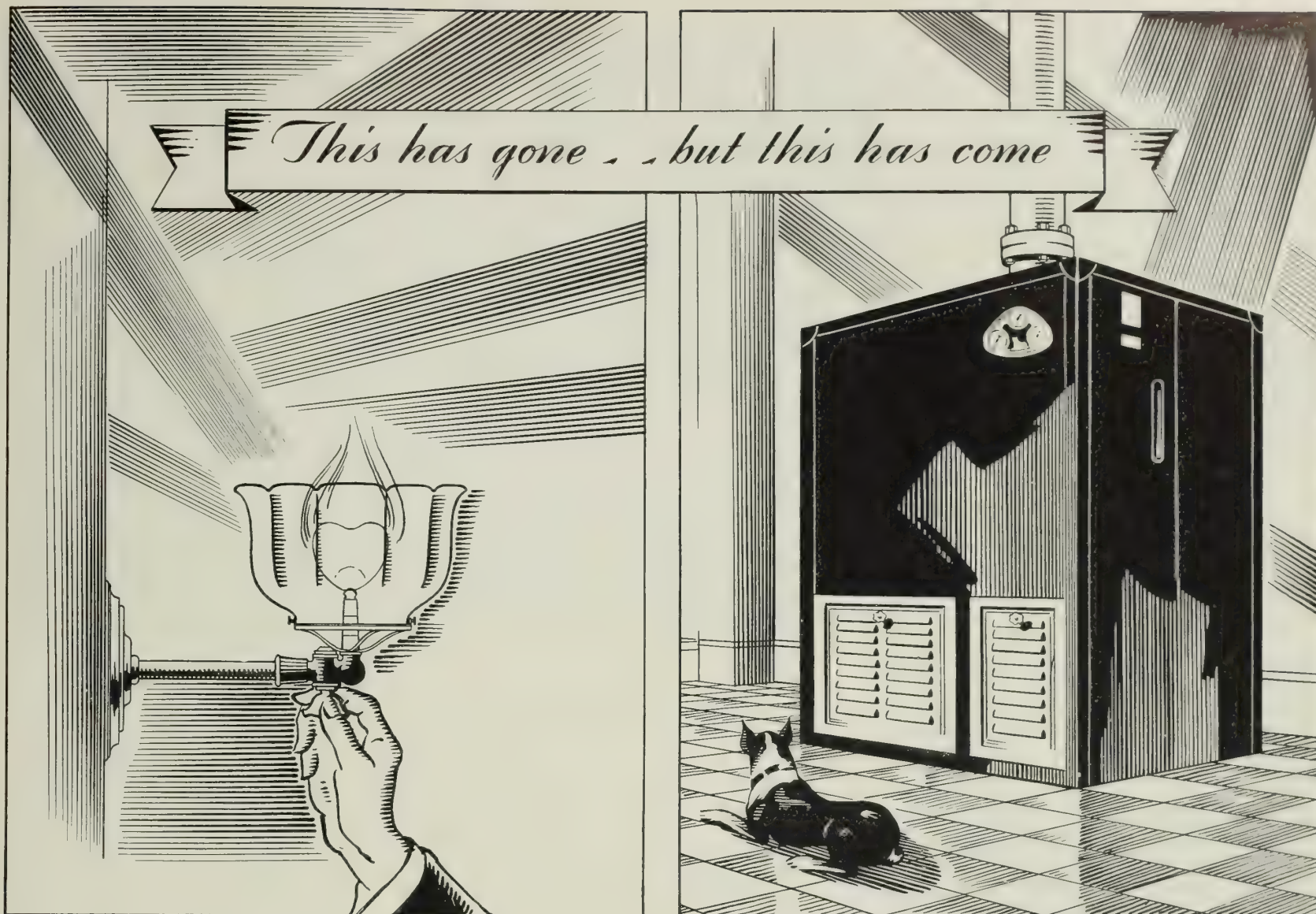
Not long ago, a broker of our acquaintance rode up in the subway with Arthur Curtiss James. During the entire trip, he insists, Mr. James calmly puffed on a cigar, without objections from either his fellow passengers or the guard.

Sheriff's successor

Most people know that A. Edward Newton, of Philadelphia, is a bibliophile who writes books as successfully as he collects them. Not so many know that he is president of the prosperous Cutter Electrical & Manufacturing Company. To a literary correspondent Mr. Newton explained the economic basis of his book-collecting:

Do you know what a safety valve is? It is something that goes off when there is too much steam in the boiler. Mark Twain refers to the captain of a Mississippi River steamer putting a small negro boy on the safety valve when he was racing the steamboat down the river. This might be called the adjustment or regulation of a safety valve. Very well. We manufacture, and have for forty years or more, an electrical equivalent of a safety valve. It is a contraption composed of magnets pulling against one

[Continued on page 18]



THE PUP AND THE GAS COMPANY

WHEN electric lighting came in, pessimists could see only a dark future for the gas company.

Today, however, in addition to the huge industrial consumption of gas, more than one hundred thousand private homes each use approximately ten times the gas formerly required by both lighting and cooking. The explanation is gas heating.

In the days of gas light a ten-room residence used about thirty thousand cu. ft. a year for lighting purposes. Today, gas-heated, it uses from four hundred thousand to six hundred

thousand cu. ft. in its heating plant alone, with gas for cooking, water heating and gas refrigeration extra.

The total gas delivered for house-heating in 1934 will be a material factor in gas company earnings. The suggestion contained in the familiar Bryant slogan—

"Let your pup be Your Furnace Man" has been acted upon so widely in the past five years that the pup has proved himself an able ally of the gas company.

THE BRYANT HEATER AND
MANUFACTURING COMPANY
17883 St. Clair Avenue • Cleveland, Ohio

BRYANT
GAS
HEATING



© B. H. M. C.

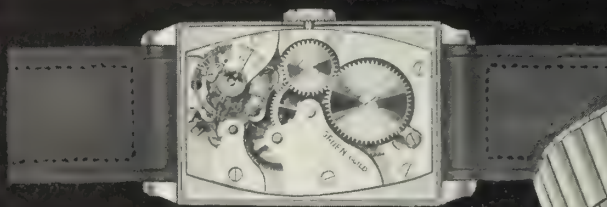


The old way



Larger, stronger parts than in any round movement in the same size case. By using all the case space, the Gruen Quadron movement makes possible a new standard of wrist watch accuracy!

The Quadron way



Top, the Techni-Quadron, for accurate time in seconds, \$60. Second, Gruen Quadron, 17-jewel Precision movement, \$65. Third and bottom, two 17-jewel Precision Quadrons, 14-kt. solid gold, gold filled bands, \$92.50 and \$107.50 respectively.

Every Gruen Watch is filled with 15, 17, 19 or 21 ruby jewels—never less!

YOU MEN who want *pocket watch* *accuracy* on your wrist

Advantages of the large size rectangular movement are obtainable in this Gruen Quadron for as low as \$57.50 complete. Other Gruen Quadrons \$50 to \$250.

HERE is the Quadron that set a record for wrist watch accuracy which, so far as we know, has never been equalled!

Two hundred Gruen Precision Quadrons—exact duplicates of those your Gruen Jeweler will now show you—were subjected to official observatory tests in Switzerland. And every Quadron so tested won the Observatory certificate of time-keeping excellence!

The idea which made this record possible—how simple it really is, as shown above!

Most rectangular wrist watches contain round

movements. The Gruen Quadron principle, makes the movement rectangular, using the entire case for larger, stronger parts. The result is the nearest approach to pocket watch accuracy ever put on the wrist!

You men who want pocket watch accuracy on your wrist—examine the Quadron at your Gruen Jeweler today.

He can show the Quadrons pictured here, together with many others in a variety of cases, priced from \$250 to \$50. From professional experience he finds the Gruen Watch today the greatest value for every dollar you invest.

There is a Gruen Guild Watch to suit the taste of every member of the family. Prices \$3500 to \$27.50.

Gruen Watch Makers Guild, Time Hill, Cincinnati, U.S.A. Branches in various parts of the world. Engaged in the art of making fine watches for more than half a century.

PRECISION

Trade Mark Reg.

This GRUEN pledge mark is placed only upon watches of higher accuracy, finer quality and finish—none less than \$65. Made only in the Precision Workshop.

Look for the mark PRECISION on the dial.



In the new Classified Telephone Directory you will find under "Gruen Guild Watches" the name of your nearest Gruen jeweler. His store is marked by this Gruen Service emblem.

The Gruen Quadron



THE COMMAND AND CREW

Personality! That human quality that enriches all contact between man and man . . . nowhere

is it more vividly exemplified than in the command and crew of the United States Lines.

Selected for command because of a seven-seas reputation for courage, leadership

and resourcefulness. Chosen for service on deck, in salon or in cabin because of an

inborn graciousness, civility and tolerance. You'll sense the difference . . . be conscious of an unobtrusive spirit of highly talented service when you travel

to Europe on a United States Liner, be it the Leviathan, world's largest, or one of these magnificent cabin ships — George Washington, America, Republic,

President Roosevelt and President Harding. Superfine service and staunch safety ride with you to and from Europe . . . under the Stars and Stripes!



UNITED STATES LINES



For complete information see your local agent or our offices: New York, 45 Broadway; Atlanta, 714 Healy Building; Boston, 75 State Street; Chicago, 61-63 West Jackson Boulevard; Cleveland, Hotel Cleveland Building; Detroit, 1514 Washington Boulevard; St. Louis, Jefferson Hotel; Philadelphia, 1600 Walnut Street; San Francisco, 691 Market Street; Los Angeles, 756 South Broadway; Minneapolis, 312 Second Avenue, South Seattle, 1337 Fourth Avenue; Pittsburgh, 705 Liberty Avenue; Washington, 1027 Connecticut Avenue; Little Rock, Wallace Building; New Orleans, Hibernia Bank Building. Paris, 10 Rue Auber; London, 14 Regent Street, S. W. 1.; Hamburg, Cor. Alsterthor & Ferdinandstrasse; Berlin, Unter den Linden 9. THESE LINES OFFER A COMPLETE FREIGHT SERVICE — SPECIFY AMERICAN SHIPS FOR YOUR FOREIGN TRADE

the sport of speedboating ... and the thrill of flying!



The Eastman Flying Yacht—fast as a speedboat on the water, maneuverable as a light plane in the air—makes possible the combined enjoyment of two great, thrilling sports. “Yachting” in the Eastman is the newest recreation

of sportsmen—a pleasurable diversion that is without comparison. ¶ Trim and clean and graceful of line, the Eastman responds so readily to the controls that flying it is really play—handling the wheel is simple. Taking off is unbelievably easy—and landing simplicity itself as only one point of contact is necessary. ¶ In the spacious cockpits of the Eastman, three or four—according to fuel loading—can be comfortably accommodated. Even when fully loaded the Eastman Yacht leaves the water in 8 to 12 seconds; climbs 900 to 1000 feet per minute; cruises at 85 m. p. h.—110 open throttle; and has a radius of over 300 miles. ¶ The “Yacht” is popularly priced at \$9595. Write for complete information about this smart, trig craft. Dealers interested in adding the Eastman Flying Yacht to speedboat lines are invited to write for full particulars.

THE EASTMAN FLYING YACHT



DETROIT AIRCRAFT

UNION TRUST BUILDING, DETROIT

CHANIN BLDG., NEW YORK :: ROOSEVELT BLDG., LOS ANGELES

EASTMAN AIRCRAFT CORPORATION
RYAN AIRCRAFT CORPORATION
LOCKHEED AIRCRAFT CORPORATION
AIRCRAFT PARTS COMPANY, INC.
PARKS AIR COLLEGE, INCORPORATED
PARKS AIRCRAFT CORPORATION

BLACKBURN AIRCRAFT CORPORATION
AIRCRAFT DEVELOPMENT CORP.
MARINE AIRCRAFT CORPORATION
GROSSE ILE AIRPORT, INCORPORATED
GLIDERS, INCORPORATED
DETROIT AIRCRAFT EXPORT CORP.

Off the Record—Continued

another—all subject to adjustment, adjustment predetermined or dependent upon local conditions or upon conditions at a distant point. It is known to the trade as an I-T-E circuit breaker. The smallest I-T-E circuit breaker is about the size of a cigar box and costs, perhaps, ten dollars. The largest I-T-E circuit breaker is about the size of six steamer trunks placed one upon the other and weighs several tons.

We do not have a monopoly of the manufacture of this device by any means, but when people want the best they almost invariably buy it from us. This, it is, that enables me to go out and pay \$20,000 for a volume of Dickens and \$60,000 for a volume of Shakespeare.

With the same acumen which has made him one of the most redoubtable book-collectors on either side of the Atlantic (his *coups* have included Hardy's manuscript of *Far from the Madding Crowd* for \$3,500, now worth over \$75,000; Stave I of the *Christmas Carol* for thirty shillings; and the only unexpurgated, uncut copy of Boswell's *Johnson* in the original binding), Mr. Newton built up his business from a bankrupt concern. Of his early days he wrote his correspondent: “When I first took over the finances of the Cutter Company, the sheriff was acting as general business manager, and I cannot imagine a worse one.”

Captain Buckham

On pages 75 to 79 of this issue *FORTUNE* prints (for the first time in America) a portfolio of the extraordinary photographs taken by Captain Alfred G. Buckham. As immobilized fragments of the panorama which is spread out before the eyes of the aviator, these photographs are without equal, artistic or technical. They suggest that the photographer and the artist who work, earth-bound, on the world's surface, have barely begun to record its line, its color, and its variety. Captain Buckham is an Englishman. His flying is done in the face of a disability which usually makes men invalids. A metal throat is not a comfortable anatomical oddity, nor is breathing through a tube entirely satisfactory. Captain Buckham has written, for *FORTUNE*, this brief sketch of a life which is as unusual as his works.

Commenced in London. But the doctors immediately discovered it was a mistake and that the event should have occurred in the country. Prompt exodus of the family took place to the Isle of Wight.

My appearance exceedingly deceitful until I was well advanced in the teens. The nurse said I always looked as strong as a Norse, but had a bad propensity for getting one leg in the grave every winter.

I decided to become a painter, my early attempts causing an eminent artist to persuade me that I had found my proper vocation. I worked steadily for some years until I went to study Turner's pictures in the National Gallery. I looked at them for a whole day, went to sleep on it, and in the morning gathered together the fruits of my labor, and made with them the finest bonfire I have ever seen. I believe I was one of the first to take photographs in open landscape with no other lighting than that of the moon and stars—a very fascinating branch of work.

Then the War came. Eventually, I sallied forth and joined the photographic section of the Royal Naval Air Service. After three weeks' “discipline” I commenced to instruct on an aërodrome, shouting and bawling the whole day through in competition with the uproar of aëro engines, and in six months my voice was gone. Then, into hospital, to emerge very little better. After three months' lecturing and testing of photographic plates and chemicals, I was appointed in charge of aërial photography in the Grand Fleet. Demobilization came three months after Armistice, but my voice was entirely gone, and throat so much inflamed and swollen that breathing was difficult. As I could not breathe in the atmosphere of a darkroom, I fell back on my paint box and did water color drawings of aërial subjects. I never arrived at the stage of making a second bonfire, for I was only given three or four months in which to collect material, and then my painting came to a sudden ending, for my breath stopped short one day in a crowded street and I crumpled up. Then one of the best surgeons in all the world turned up, and decided that me and my larynx must part company for good, for it was the most abominable larynx he had ever seen.

That was ten years ago, and for nine of them I have been flying and taking aërial photographs, with discretion, for I suppose that when a man is classed 100 per cent disabled he mustn't expect to compete with Colonel Lindbergh.

"Quietized" office of C. A. Upson, President of the Upson Company, Lockport, New York, manufacturers of the famous Upson Wallboard.



NOISE levies a staggering toll on American business. Records prove that no single factor—save poor ventilation—causes more absences, more resignations, more forced retirements than does Noise, whether it comes from within the office or without. Noise cuts down efficiency—the quality and quantity of the work turned out—both your own and that of your staff. Worst of all, it affects most severely your highest-paid workers—your executives and heads of departments.

Why suffer its distractions longer? Why not "quietize"

your office, and those of your important staff, with carpets? You'll find, as hundreds of business men have found, that carpets will pay for themselves many times over, in a greatly increased production.

There are deep-piled Mohawk fabrics to deaden direct Noise and to absorb the incessant barrage of indirect sound. Your nearest Mohawk dealer is prepared to counsel you on weaves, colors, patterns, pile-depths and costs—and to measure and lay your carpets. Why not consult him?

MOHAWK RUGS & CARPETS

BURLINGAME
PUBLIC
LIB.

© 1930 MOHAWK CARPET MILLS, AMSTERDAM, NEW YORK

FORTUNE LIES ABOVE THE CLOUDS



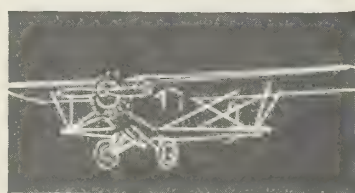
The Buhl Senior Airedan is an eight-place, dual-control plane, priced at \$18,500 with the Wasp engine and \$19,500 with the Hornet or Cyclone.

GOLD at the end of the rainbow was once a dream. Today it is a fact. Time is money just as surely as though it were minted in the Treasury. Executives take to the air—the rainbow trail—pursuing it. Corporations establish air transport as a definite part of progressive programs. Aviation has become inevitably allied with big business. Planes swoop and circle on their stated paths... profits mount when the unproductive hours devoted to travel are reduced to a minimum. And planes today are produced and sold on the same strictly business basis upon which they are used. The Buhl Aircraft Company has behind it almost a hundred years of leadership in many varied enterprises. Surely that is sufficient guarantee that its policies and its product are worthy of consideration by men to whom air travel has become a byword for commercial and industrial progress.

We will gladly mail to any executive an interestingly illustrated brochure entitled "Above the Clouds."



The Buhl Standard Airedan is a six-place, dual-control plane, priced at \$13,500 with the J-6 Wright Whirlwind engine.



The Buhl Sport Airedan is a three-place, dual-control plane, priced at \$12,000 with the J-6 Wright Whirlwind engine and \$11,000 with the J-5.

BUHL AIRCRAFT COMPANY
MARYSVILLE, MICH.



Statistics

Matter of record

The strata of the American financial atmosphere have been plumbed for 1928. Density is a bit greater, but the ceiling no more remote. At sea level there are two million wage earners getting thirty cents an hour or less; that is to say there are ten million people living on family incomes of eighteen dollars a week or less. Overhead there is the wide belt of incomes from one thousand to three thousand dollars. Rarification sets in at the next level.

As a matter of record, the 1928 barometric readings from the three-thousand-dollar level up, with 1927 readings, are printed below:

Stratum	1928	1927
\$3,000— \$5,000	3,114,489	1,209,345
5,000— 10,000	561,114	567,700
10,000— 25,000	265,438	252,079
25,000— 50,000	67,300	60,123
50,000— 100,000	26,838	22,573
100,000— 150,000	6,988	5,261
150,000— 300,000	5,605	3,873
300,000— 500,000	1,720	1,141
500,000— 1,000,000	971	557
1,000,000 and over	496	290

Barometric computations for the extreme reach, over five million dollars, are speculative. Most reliable readings indicate that in 1928 there were twenty-four (as compared with eleven in 1927) individuals with incomes over five million dollars.

It appears that stock market maneuvers are safer at altitudes from \$25,000 up. At the level under \$5,000, something short of \$300,000,000 was gained from speculation by 3,000,000 people (say about \$100 a head). The half million in the 5 to 10 class made \$360,000,000 (say about \$720 a head). The quarter million in the 10 to 25 class made \$700,000,000 (say about \$2,800 a head). The 67,000 in the 25 to 50 stratum made \$540,000,000 (say about \$8,000 a head). The 26,000 in the 50 to 100 level made \$348,000,000 (say about \$13,000 a head). These are 1928 figures.

What happened to the denser strata when the market broke is shown by the 1929 withdrawals from savings banks in New York State, which exceeded by \$204,000,000 the amounts deposited.

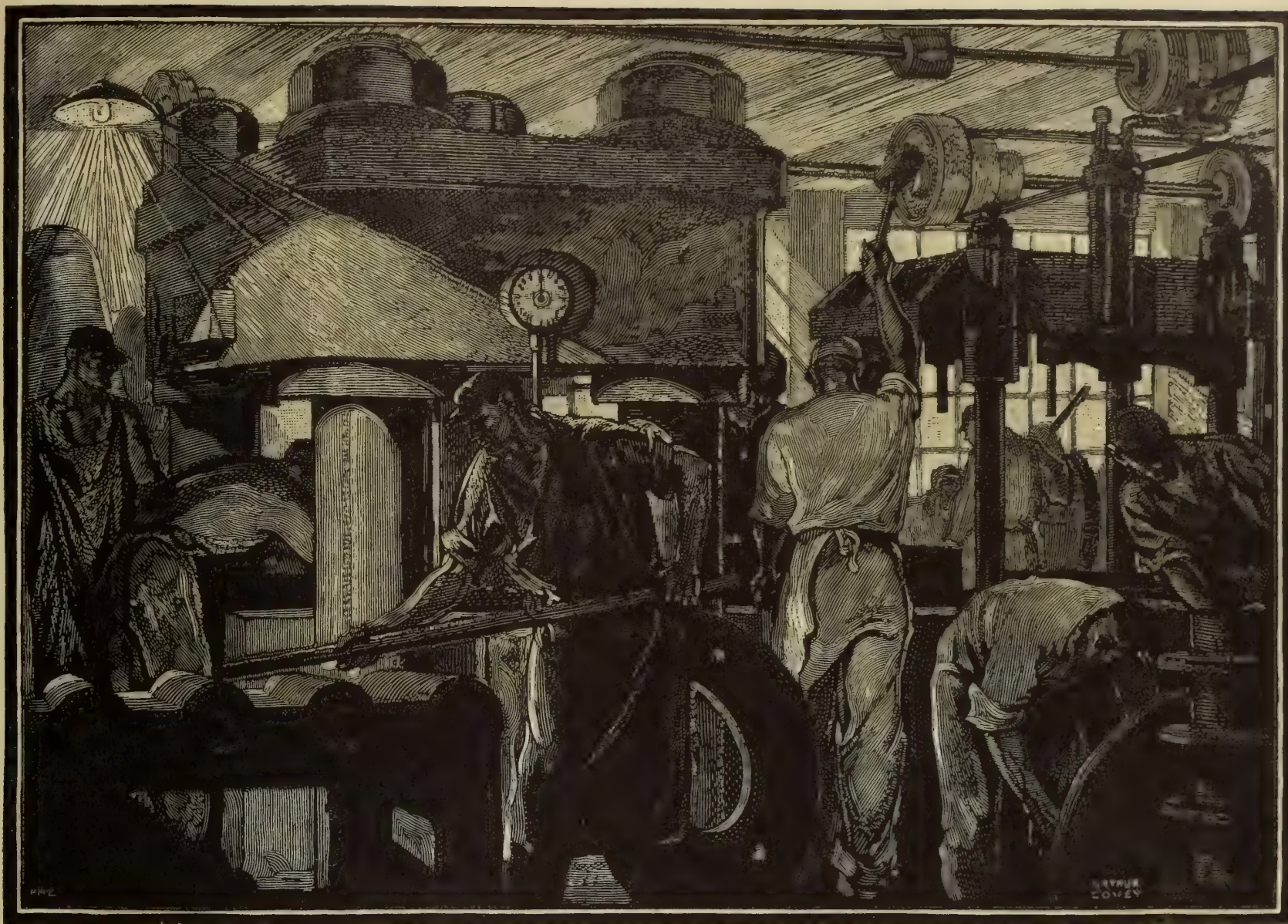
Coal to coal

Reverse the processes of manufacture, and almost everything will turn, in part, to coal. A ton of steel will become a pile of iron ore and two tons of coal. This printed page will become a bit of pulp, a stain of chemicals, and twice its weight in coal. A ton of cement will revert to its own constituents and half a ton of coal. A roof of copper shingles crumbles into metal and three times its weight in coal. Or reverse the processes that keep a house running. If the heat coagulates again into fifteen tons of coal, the gas will solidify to eleven, the ice to four-fifths of a ton, the electricity to one and one-fifth tons. Of course some domestic processes, reversed, become water power or oil. But nine-tenths of the billion horsepower in America is produced by fuels, and, of these, three-fourths by coal. The supply of coal is such that it would last four thousand years at four hundred million tons a year. England's coal at that rate would last four hundred and fifty years, Germany's a thousand.

The United States has the world's largest chemical industry. It has grown 500 per cent in the last twenty-five years. The Allied Chemical & Dye Corporation is the largest chemical company in the world. Add to Allied Chemical, du Pont and Union Carbide & Carbon, and the combination is about twice as big as the I.G. Farbenindustrie or the English Imperial Chemical Industries.

Of the 20,000 theatres in the United States, only about 6,250 are equipped to show sound pictures.

It would take 2,000 freight engines to break one cable on the Hudson River suspension bridge. A yard in diameter, each cable contains 26,474 separate wires.



Wood block engraving by Howard McCormick from mural by Arthur Covey.

Grains of tough, sharp abrasive — plastic organic bonding material — application of heat — tremendous pressure. And one type of grinding wheel is formed.

In direct contrast, wheels their equal in cutting efficiency, but for different kinds of work, take their form from pouring a semi-liquid mass into molds.

Three abrasives, five bonding processes, hundreds of formulae are employed by Norton Company, Worcester, Massachusetts in making grinding wheels to meet the world's widely varying requirements.

NORTON

Grinding Wheels

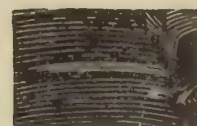
Grinding and Lapping Machines

Refractories

Porous Plates

Floor and Stair Tile

Pulpstones



The New York Trust Company

*Capital, Surplus and Undivided
Profits \$45,000,000*

TRUSTEES

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FREDERIC W. ALLEN	Lee, Higginson & Company
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VANDERBILT WEBB	Murray, Aldrich & Webb

100 BROADWAY

40TH STREET AND MADISON AVENUE

57TH STREET AND FIFTH AVENUE

How Impatience

WHICH DISRUPTED MERCHANDISING, SELLING AND MANAGEMENT

Undermined Earnings

A GREAT doctor has said: "Over 60% of the important cases are diagnosed incorrectly. Not until post-mortems are compulsory will the medical profession approach a scientific status."

In business, the lack of analyses of the causes of failure and success is correspondingly serious.

Here is the story of a re-organization that proved almost fatal, due to erratic merchandising, unbalanced selling, and confused management—all in all, a general demoralization, primarily the result of impatience.

The Company made packaged specialties for a universal need. It was an old Company, ultra-conservative in its methods, for years the leader in its field, and enjoying the highest reputation with the trade and the public. Its distribution was through department stores and other high class outlets, 70% direct.

The line consisted largely of shopping merchandise, 90% of which was sold through *selection* by the consumer rather than by specific demand.

Recently the business had become increasingly subject to style trends; the sales curve had turned downward, and the management had suddenly determined that heroic measures were necessary.

Counsel was called in. Two drastic changes were proposed:

First: That a specialized Merchandising Staff be developed, composed of persons competent to discover the preferences of the trade and the public, and to reduce sales resistance by creating new lines to meet such preferences;

Second, and complementary: That a new Sales and Advertising Policy be adopted in order to make effective *through the trade to the consumer*, the results of this merchandising work.

The reasons for the changes were lucidly set forth; their drastic nature was pointed out, the dangers of precipitate action were presented with all force, and a five-year period was recommended as the minimum time required for the transition.

The *need* for the changes, now obvious to the fundamentally-able management, proved too much for their patience. They felt

that the whole scheme could be launched at once. "We have considered your arguments," they wrote to their advisors, "but do not agree. Our surplus is over \$1,000,000 and we see no reason for stretching the program over five years. We are determined to do the job in two." Whereupon they began.

They cut out all jobber business; they increased their sales force; they re-arranged sales quotas; they re-allocated authority. *The project was fine; the strategy was deplorable.*

What followed can be imagined by those familiar with the ramifications of modern merchandising and selling . . . the effect of organizing overnight a merchandising group . . . the consequences of overnight changes in sales management, bases of compensation, field supervision, and sales territories . . . the use of advertising on which the organization could not capitalize . . . the inevitable destruction of morale . . . the insidious trade gossip . . .

Sales declined; profits fell from the \$542,000 and \$527,000 of the two preceding years to \$127,000.

The management became confused; the aggregate consequences of acts good in themselves, floored them. The company floundered . . .

Happily, the business had the reserve power to resist the shock. The following year the profits were \$208,000—last year, \$406,000 and now, 4 years after the changes were instituted, they are 90% of the previous maximum.

THIS is one of the cases we have studied. From our analyses of business failures and successes we have listed the ten cardinal causes of falling profits—three of which were present in this case.

Foreseeing such dangers and averting them, is fostered by our basic Policy: *The policy of performing all the functions of an advertising agency under a plan of operation by which our fee (profit) is divorced from the size or allocation of a client's appropriation.*

It will be seen that such a policy sets no obstacle in the way of a finely balanced, wholly unbiased service.

COWAN & DENGLE

ADVERTISING • MERCHANDISING • SALES COUNSEL

NEW YORK

IF YOU WANT FASTER DISTRIBUTION



CLEVELAND is at the focus of the richest market you can cultivate, and from Cleveland the time element in deliveries works in your favor.

¶ Between closing time at your Cleveland plant and opening time next morning at your customer's place of business, rail freight reaches Buffalo, Pittsburgh, Columbus, Toledo

and Detroit. Second morning freight deliveries enter New York, Philadelphia, Baltimore, Indianapolis, St. Louis and Chicago. Third morning freight service covers Boston, Richmond and the Twin Cities.

¶ Cleveland's small package needs are met by established truck service in all directions, and by electric trol-

ley freight schedules throughout this densely populated section.

¶ Now, when quick turnover and prompt delivery influence every order, Cleveland offers outstanding advantages as a distributing center. For specific data regarding distribution facilities at Cleveland, address this Bank.

GUARDIAN TRUST COMPANY

CLEVELAND, OHIO

© G. T. Co.

RESOURCES MORE THAN \$170,000,000

GARDEN GOLD . . . A LATE DISCOVERY

SPACIOUS living, perhaps unfortunately, waits upon an ample income. Money, you will remember, made the mare go. And today the family motor car and the family home are not otherwise than the mare.

Whenever you see a pleasant house, well-kept, furnished in excellent taste, and graciously gardened, you may be certain it is not so except by virtue of a prosperous income.

Gardened . . . perhaps that, more than anything else, is the sign and symbol of prosperity which has flowered into generous living. For when men and women of the better sort acquire a surplus, the first thing they want is a home of their own, with a garden.

AND BECAUSE THIS COUNTRY has fallen heir to unparalleled prosperity, sound and ever growing, gardening has taken on the aspect of a vogue. It has grown with startling rapidity and continues to spread.

In seven years Better Homes and Gardens has reached, almost without effort, a circulation of a million, three hundred and seventy-five thousand. 85% of these families own their own homes. They subscribed to Better Homes and Gardens almost on sight because it is really different from all other home-making and gardening magazines.



This single circulation—more than six times as large as any other in this field—covers one in every seven of all the owned urban homes in America.

77% of these homes are within the retail trading areas of cities over 25,000.

“HOW-TO-DO-IT” advice on gardening and home-building created this circulation—brought within reach of advertisers this mine of sales possibilities. No forcing methods—just natural healthy growth. Can you think of any reason why you should not be getting your share of this late discovery—Garden Gold?

BETTER HOMES AND GARDENS DES MOINES, IOWA



RENE

No prouder vessel flies the Union Jack than Rene. She is a veritable Queen of the Seas—an ambassador from America to every foreign port she graces. Rene is from the boards of Cox and Stevens, Inc. and John H. Wells, Inc., Naval Architects of New York. Her over-all length is 236 feet, beam 34, depth 19. Power—two 1100 H. P. Winton Diesel Engines. Cruising speed 15 knots. Cruising radius 7000 miles. Among Rene's advanced aids to navigation and control are Sperry stabilizer, gyro compass, radio direction-finder and Fathometer. Built by Pusey & Jones for the Rene Corporation, New York.

Distinguished yachts recently launched at the yards of The Pusey and Jones Corporation

NAKHODA

Length 236 feet

Owner:

FRED J. FISHER, Esq., NEW YORK

Architects:

COX & STEVENS, INC. JOHN H. WELLS, INC.

~ ~ ~

CAMBRIONA

Length 236 feet

Owner:

W. O. BRIGGS, Esq., DETROIT

Architects:

COX & STEVENS, INC. JOHN H. WELLS, INC.

~ ~ ~

LOTOSLAND

Length 204 feet

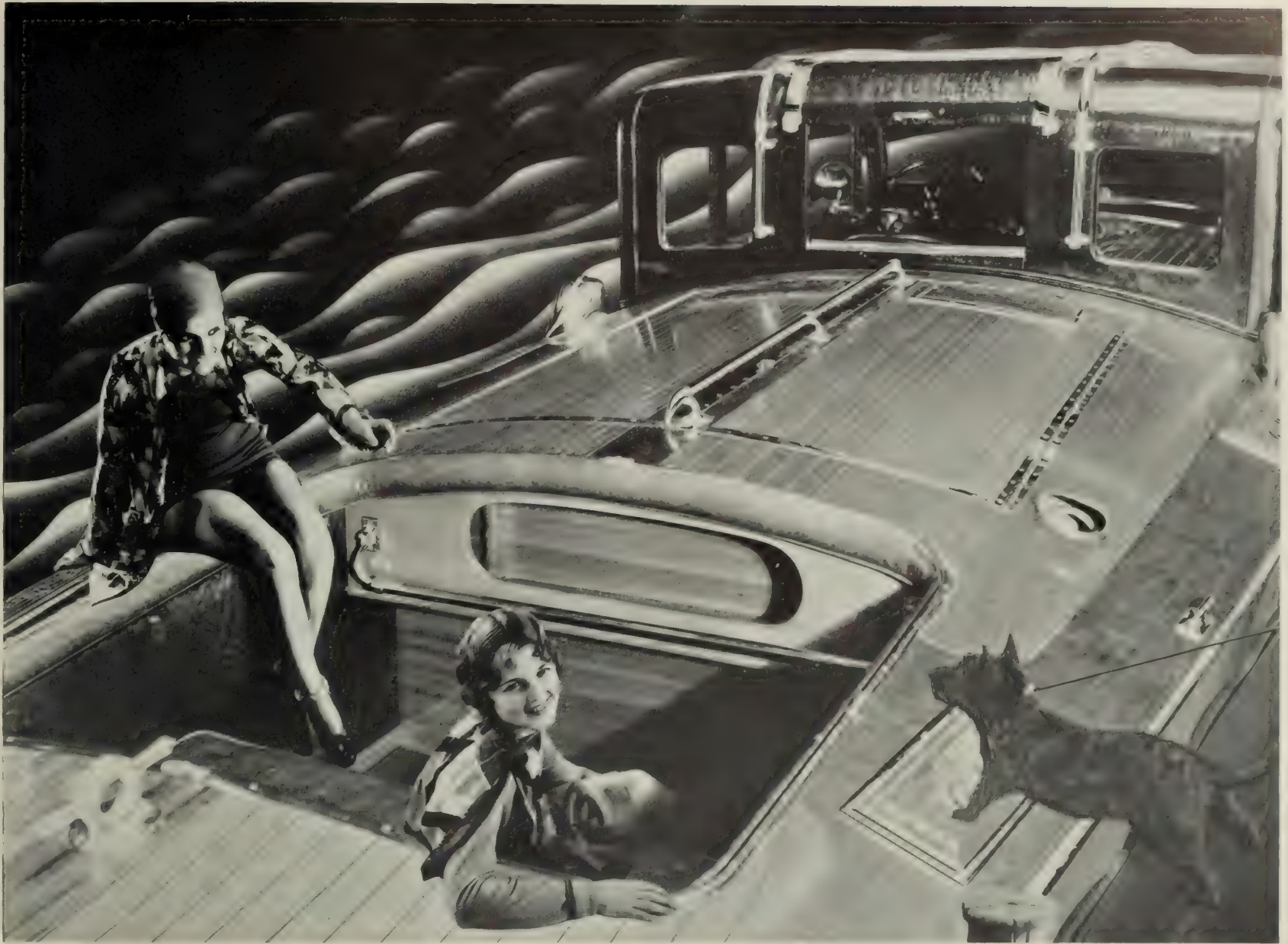
Owner:

E. A. DEEDS, Esq., DAYTON

Architects:

COX & STEVENS, INC.

THE PUSEY AND JONES CORPORATION
Shipbuilders Since 1848—WILMINGTON, DELAWARE



"COME ON, LET'S GO!"

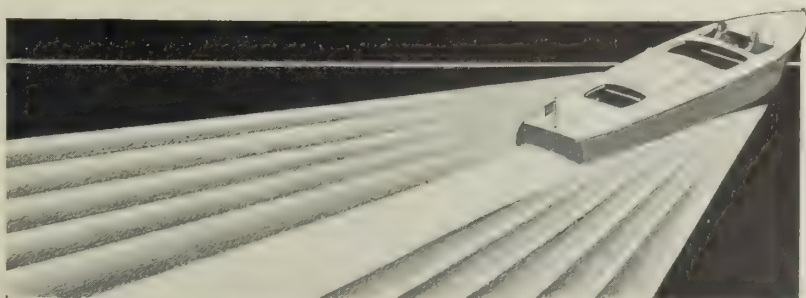
Will there be a Gar Wood at your wharf this summer? It's time now to think of how much such a boat will give to your play-days, to the delight and comfort of the whole family.

Every Gar Wood boat is kin to the famous Miss Americas. Designed and built by the very same craftsmen.

Poised, eager to go, your Gar Wood answers every whim. Ready to whisk you over limpid moon-lit waters, to slip cleanly

through the chop, to soar over the long swells, with the gale or in the eye of it—with equal nonchalance.

All 12 of the new Gar Wood models are delightful performers. The variety of types, open and closed, and including the fastest stock boat built, assures you of just the sort of craft you can enjoy to the utmost. You will be interested in the details. Your request will bring a handsome booklet post-haste.



Twelve New Models—30-55 m. p. h. \$3,150 - \$12,950

GAR WOOD INC.

THE GREATEST NAME

IN MOTORBOATING



206 River Road
Marysville, Michigan.

Factory Branch
1860 Broadway, N. Y. C.



54 ft. Commuting Cruiser, 14 passengers, speed up to 40 M. P. H., two 200 H. P. Marine Motors, \$15,000



WHAT a way to entertain—the Chris-Craft way! So fast is Chris-Craft—so safe and so luxurious—it brings within reach the sports and recreations of the whole coastline! Every Chris-Craft inevitably becomes a social center. Whole parties may go in restful luxury at express train speed to distant regatta, dinner or dance—to sports and recreations everywhere on water ' ' ' With a Chris-Craft you find yourself more frequently invited and more frequently inviting social contacts with really worth-while folks. The boating set is a cheery, happy family, socially active and socially worth-while. Industrial leaders, statesmen and bankers find Chris-Craft the means to secure needed rest and recreation in limited time ' ' ' Let Chris-Craft solve your recreation and entertainment problem. Between the nimble twenty-foot runabout and the stately Chris-Craft yacht is the widest range of pleasure craft ever offered. All are luxuriously cushioned, all are seaworthy, safe and fast. All have automobile type controls and starting, lighting and steering devices. Chris-Craft merchants throughout the world will demonstrate and describe the various models. Illustrated catalog may be had by writing Chris Smith & Sons Boat Co., 124 Detroit Road, Algonac, Michigan.

Chris-Craft
World's Largest Builders of
All-Mahogany Motor Boats

Runabouts—Sedans—Commuters—Cruisers—Yachts
24 Models—20 to 48 feet—\$1895 to \$35,000

Volume 1

Fortune

Number 3

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BURLINGAME
PUBLIC
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To Make a Circus Pay

Is harder than catching giraffes—it's one man's secret

ONE of the very best ways to lose a lot of money and lose it quickly is to start a circus. In the 163 years of American circus history, the accuracy of that statement has been challenged by hundreds of men and millions of dollars. Again and again it has been proved true. Some circuses have thrived through a lifetime; some have floundered for a week; some have been large and elaborate outfits; some have been scarcely more than peep shows. With less than a dozen exceptions they have all, in the circus phrase, "come a patsy." (Circus words and circus phrases, without which no circus story can be told, will be found in a glossary in the appendix.) Only a half dozen survive today as successful organizations. One and only one, Ringling Bros. and Barnum & Bailey Combined Shows, indisputably the greatest show on earth, has achieved magnitude, stability, commercial significance.

Circus is animals. Circus is "art." Circus is rolling stock and big top, razorback and band. Circus is everything you can see and hear upon the lot—and one thing more. It is the thing that the hundreds of men who have come a patsy in circus have lacked.

The *thing* is not a big name. There was the case of Coup & Lent's New United Monster Shows to prove that. W. C. Coup was Barnum's first partner, originator of the railroad circus, proprietor for years of a consistently popular show. L. B. Lent built up in the heart of New York City a circus "first class in every respect and financially a success." He toured the country with it until his death. These two names, among the best known in Circus, glistening in fresh paint on wagon and car, riding on pennants above the big top on old familiar stands, ought to fill up the "blues." It set out in the spring of 1916, a twenty-car outfit (the railroad car is the yardstick of the circus) under the direction of L. J. Stark, a sea-

soned showman. On the twenty-eighth of August, just past midseason, it failed.

Gollmar Bros. Circus, a new name in 1891 but a popular one by 1916, went out under new but experienced direction in 1917. It failed in a year. Ballard, Mugivan & Bowers, impresarios extraordinary of circusdom, put out a well-equipped and well-advertised circus under the Gollmar ægis in 1922. It had, in the laconic phrase of John M. Kelley, "a losing, disappointing season." Incidentally, John M. Kelley is the brusque, bald, able lawyer for the Ringling shows and the compiler of the only authoritative record of circus successes and failures. It is a brief which was presented in the settlement of the estates of Henry and Alf T. Ringling. All circus men know of it; few have ever seen it. It is a circus *Book of the Dead*. In it are recorded the scores upon scores of circus patsies of the last hundred years: the Buffalo Bills, Sellses, Coles, Forepaughs, Robinsons, Paddy Ryans, Sipes, Blakes, Bostocks, Sangers, Stones, Costellos, Amesess, Rices that have taken the road as five-, ten-, or twenty-car circuses and have failed entirely or have accepted gladly the opportunity of being gobbled up by some other. The inevitable conclusion of one who reads the brief is that the circus has been more consistently productive of ruin than has any other commercial enterprise.

The *thing*, again, is not perseverance. The same Stark who "took a fall" with Coup & Lent's in 1916 demonstrated the inadequacy of perseverance *per se* with the same outfit in 1917. This time the posters read Coup & Lent's Enormous Shows United. This time it failed on the seventh of July, seven weeks earlier in the season than it had in 1916.

The *thing* is not more money when wet tops or other misfortunes follow the circus. Coup & Lent's proceeded *immediately* to demonstrate that. Backed



with \$100,000 raised by a syndicate in which a Cedar Rapids, Iowa, bank (already a creditor) participated, Coup & Lent's took the road again on the eighth, died dismally and completely at Connellsville, Pennsylvania, on the eleventh, ruining the creditor bank, driving one bank official to suicide.

The *thing* is not good will. Lawyer Kelley drew up his brief to show that there is no such thing as good will in the circus business. The late H. H. Tammen, notorious as ex-bartender of Denver's Windsor Hotel and as publisher of the old Denver Post, a shrewd man and a habitual promoter, joined with Willie Sells in 1905 to organize the Sells-Floto circus. When Sells-Floto was sold (as were a great many others in that year) to Ballard, Mugivan & Bowers in 1921, Tammen said, "I was in the circus business for nineteen years . . . When we concluded to get out . . . and endeavor

greatest show on earth. The fortune has proved sufficient to buy a small railroad here and there, sink oil wells now and then, buy fine paintings (and just paintings), a mansion on Fifth Avenue, an estate in New Jersey, and a Venetian palazzo in Florida. And, in September, 1929, to buy out in one magnificent gesture the only five Ringling competitors worthy of notice.

This circus had the *thing*. A generation ago the *thing* might be called *barnum*. But *barnum* is not enough to assure the success of the 20th century circus. Nowadays, one needs *ringling*. *Ringling* is infinite capacity for detail and for organization; *ringling* is forty-odd seasons with at least one Ringling brother on the lot at each performance; *ringling* is knowing the length of every railroad siding in the country and knowing railroad men by their first names; *ringling* is willingness to pay a fortune (said to be \$30,000) for Goliath, the sea

dren who travel with it, attending school as they go, reciting to teachers paid by the circus; a seating capacity, when on the road, of 15,000. It consumes in a day: 300 pounds of butter, 300 gallons of milk, 200 pounds of coffee, 35 bags of table salt, 2,500 pounds of fresh meat, 2,000 loaves of bread, 250 dozen eggs, 1,500 pounds of vegetables, 2 barrels of sugar, 50 pounds of lard, 100 dozen oranges, 50 tons of hay, 20 tons of straw, 350 bushels of oats, 4 cords of wood, all bought in local markets. Nearly 5,000 meals are served every day in the cookhouse. (When pancakes are on the breakfast menu, more than 10,000 are eaten.)

In a season it will give 400 performances before a total of about 4,000,000 people. It will gross about \$6,000,000, including income from side shows and concessions, an average of \$1.50 per customer. It will travel 15,000 miles (on one day 297 miles, as from Portland, Maine, to Mon-



ored to find a buyer, it took us a year to find one and then we received about \$219,000 for the property. I know the property was itself worth more than that; then I began to argue about the good will, the value of nineteen years of advertising . . . I got nothing in the world for the good will, and the physical property that the purchaser got cost me considerably more than I received for it.

"We also owned the Buffalo Bill's Wild West and Congress of Rough Riders of the World title, for which I paid \$20,000 and that was thrown into the bargain . . ."

BUT—there does stand one colossal contradiction to all well-tabulated evidence that no one can make a big thing of Circus. One great American fortune has been amassed in this precarious enterprise, the \$50,000,000 plus of John Ringling. During the last forty-six years, while the foregoing commercial tragedies were being enacted, working with similar equipment (some of it identical, purchased from patsies), this Ringling Bros. and Barnum & Bailey snowball has been rolling uphill, growing at each revolution, attaining at last and beyond dispute the rank of

elephant, though no one thought the animal could survive two weeks of circus travel. This is *barnum* times infinity. Given the capital, the art, the rolling stock, the punks, the tops, the razor-backs, and sufficient *ringling*, one may, perhaps, today pay dividends on circus investment.

The first Ringling circus opened on May 19, 1884, at Baraboo, Wisconsin. Its main tent canvas (no one today would call it a big top) measured forty-five by ninety feet, its side show tent, thirty by forty-five. It had twenty-two horses and eleven wagons, no band wagon, no menagerie, no wild animals.

Today, billed under the least elaborate name it has ever used, the Ringling Bros. and Barnum & Bailey Combined Shows (gone the "greatest," gone the "enormous," "monster," "stupendous," "universal," "spectacular," all of which have done time in the Ringling name), "Mr. John's" circus has, among other things: a pay roll of more than 1,600 people; 735 horses and more than 1,000 other animals; 100 double-length railroad cars; over 100 cages, dens, tanks, pens, and lairs; its own doctors, lawyers, dentists, detectives, chefs, cooks, waiters, power plant; over 60 chil-

treas, Canada; on another, 10 miles, as from Newark, New Jersey, to Jersey City). It will spend each day about \$18,500, a great deal of it in local markets.

It has been valued officially and conservatively at more than \$3,000,000.

And it has John Ringling, "Mr. John," as he is universally known in the business, last surviving of the five proprietors (besides him, Al., Alf. T., Otto, and Charles) of the original Yankee Robinson and Ringling Bros. Great Double Shows, Circus and Caravan. (The widow of brother Charles, and Richard T., son of brother Alf. T., each own a part of Ringling Bros. and Barnum & Bailey, but do not share in Mr. John's other circus holdings.)

There has never been another hundred-car circus. There has never been another so successful. But Mr. John until last autumn had a rival—the American Circus Corporation, the cerberus Ballard, Mugivan & Bowers. The story of Circus, or of Mr. John, cannot be told without mention of them.

When the Ringling show was known as Ringling Bros. World's Greatest Shows and Spectacle,

Jerusalem and the Crusades (that is, in 1904, three years before their purchase of the Barnum & Bailey Greatest Show on Earth) Jeremiah Joseph ("Jerry") Mugivan and Bert Bowers, one time ticket takers for the Sanger & Lenz Show, organized a circus of their own: the Great Van Amburg Show. The firm of Mugivan & Bowers (or, as it shortly became upon the admission of Ed. Ballard, proprietor of the West Baden Hotel, West Baden, Indiana, Ballard, Mugivan & Bowers) was thereafter continuously in the circus business as a major owning and promoting triumvirate. The involution of their holdings were many; even circus people were surprised at the list which appeared in the *Billboard* when Jerry Mugivan died on January 22 of this year.

In 1921 they formed the American Circus Corporation. This chain of holdings, consolidated a year ago into five circuses under the names of

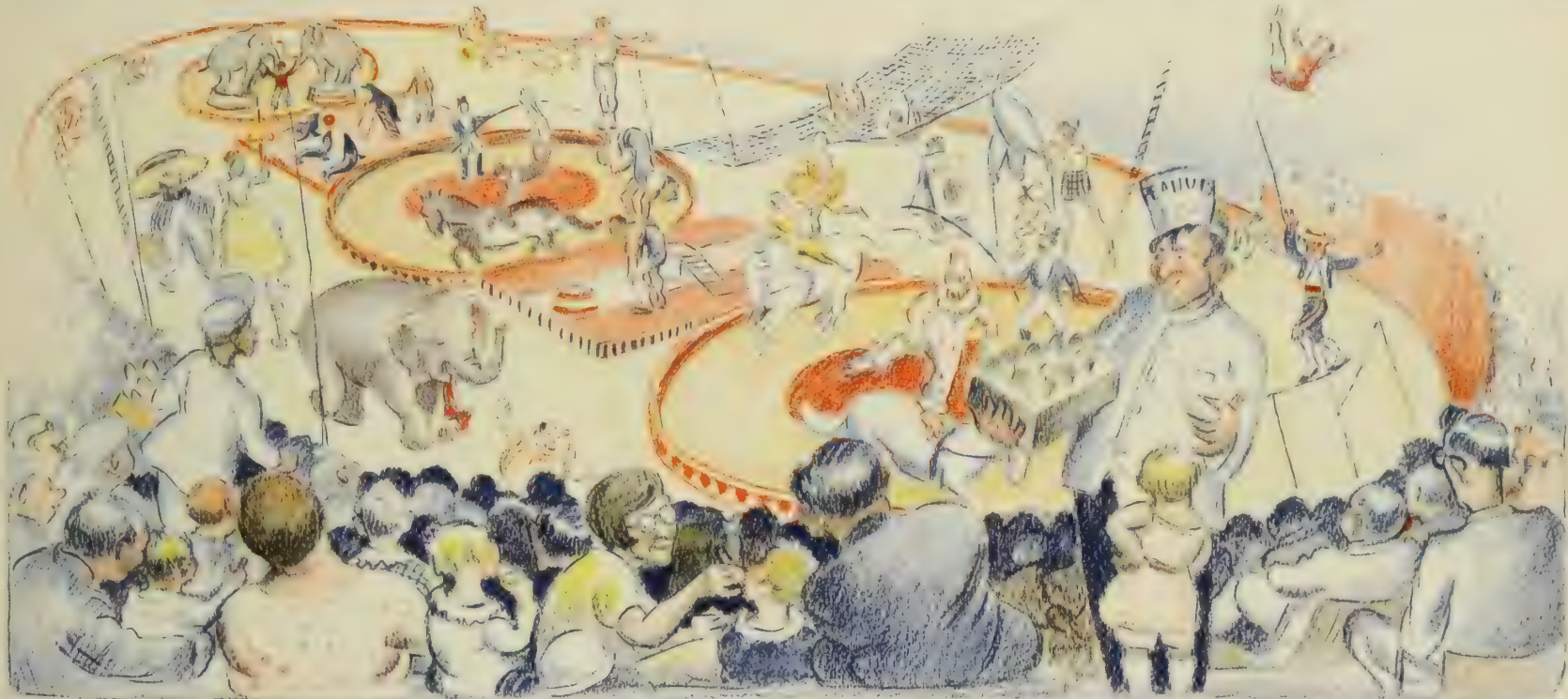
of most Garden activity, and he was boxing's high priest. Nevertheless, the Garden in April is Mr. John's. At least, so thought Mr. John, and so thought the public.

But Mr. John and the public found that they were in the minority. The other Madison Square Garden directors declared flatly and finally to Mr. John, "You cannot bring your three asterisk circus into the Garden unless you agree to fold it up each week on Friday and let us put on a fight. You cost us important money last year, sixty grand at least." Mr. John would not agree. The contract went unsigned into the wastebasket.

Mr. John said he would open his season in the old Twenty-second Armory. The deal was almost consummated when it became known that the Garden officials had made an agreement with the American Circus Corporation. Sells-Floto would play the Garden in the spring. Every night

the Chicago Coliseum or under the big top on the Kansas prairie, you will not detect any difference in the circus, no matter which of the six you see. Sells-Floto, for example, will still be Sells-Floto. Going Big Business has not meant mechanization or regimentation in any visible degree. The death-defying leaps and the whirlings of acrobats will make your eyes start from your head as always. Sequined ladies will spring from tanbark to pad to tanbark just as in the days when you craned your neck to see over the head of the grown-up in front of you on the blues. You will not realize that it is a business—that part of Circus is behind the scenes, before circus day.

For example, you are not apt to reflect that the presence of the Ringling Bros. and Barnum & Bailey Combined Shows at the fairgrounds is a certification of the prosperity of your community. But your Chamber of Commerce knows that



Sells-Floto, Hagenbeck-Wallace, John Robinson, Sparks, and Al G. Barnes (the last two acquired in the winter of 1928), was able to challenge the power of Mr. John, though none of the five units could challenge the prestige of Mr. John's hundred-car organization. Mr. John did not mind. There are enough towns to go around. Mr. John can only visit about 150 in a season, and every town wants a circus. There is just one thing which Mr. John will permit to no rival. Mr. John opens the circus season, and he opens it at Madison Square Garden. For a generation there has not been a year in which neither the name of Barnum & Bailey nor Ringling Bros. has appeared on its hoardings.

And this spring, as always, Ringling Bros. and Barnum & Bailey Combined Shows is coming to the Garden. But thereby most decidedly hangs a tale. A tale of long arguments and hot words in the offices of the Garden management. The tale of the demise of the American Circus Corporation.

Madison Square Garden was built as a temple to the padded glove, and Mr. John helped to build it. One of Mr. John's most famous discoveries, Tex Rickard, until he died, was the catalyst

but Friday night. And that was the end of the American Circus Corporation. The following morning the 150 cars, 4,500 people, 2,000 animals, tents, baggage stock, names, in fact, the entire peculiar civilization of their five shows belonged to Mr. John. A circus man who would say to Mr. John, "I'm playing the Garden next year," must smile when he says it.

So Mr. John now has six front rank circuses and four or five carnival outfits—almost \$10,000,000 worth. Big business. All routings made from a single office. All profits to Mr. John alone (excepting only the share of Mrs. Charles and Richard T. in the profits of the Ringling Bros. and Barnum & Bailey unit.) It is a monopoly, but the half-voiced threat of procedure against Mr. John under the Sherman Law brought only laughter from those who had stopped to think that Mr. John is not selling anything but entertainment, that it has always been the boast of menagerists that their function is primarily educational, that restraint of trade, price-fixing, and the other high crimes of trusts have certainly not been committed by Mr. John.

From your seat in Madison Square Garden or

Ringling statisticians have been checking on employment conditions, crop prospects, bank deposits, rail facilities, road conditions for months past. If these did not measure up to Ringling requirements, Mr. John would have gone right by you. Nor are the reports upon which he bases his operations out of date. The route of the circus may be changed a dozen times during the season. The advance car which precedes the circus by a month over a tentative routing is in constant contact with Sarasota, Florida, headquarters. The reports of advance men may change the route completely. For this reason, the circus performer when he starts out in the spring does not know what towns he will visit before he starts playing the halls in November. New itinerary slips are posted in the cookhouse at monthly intervals. When next month's route is posted, hundreds of post cards are sped homeward, reading, "Having a swell season. Feeling fine. Write soon, Greeley 6th, Laramie 7th, Cheyenne 8th, Wheatland 9th, Douglas 10th. Wish you was here. Take care of yourself. The new high-school act is sure getting 'em up in our laps. Will close with love to all."

Mr. John has a circus factory also at his winter quarters in Sarasota, Florida. This summer, while the circus is on the road, next year's big top will be made. A new one is provided every year. One hundred and fifty thousand dollars' worth of materials and labor go into the making of this, the largest stretch of canvas ever raised, the central roof of a twenty-acre colony.

Although it is a perfectly good tent in the fall, a brand new one will go out in the spring, twenty-five feet longer than it will come home at the season's end, so much does it shrink in the summer rains. Mr. John prides himself as do his canvasmen that once his big top is pitched, it is never in danger of blowing down; its roof does not leak. And this in spite of the fact that it is always up within an hour of the arrival on the siding of the last section of the circus train, is in each twenty-four hours taken down, packed, portaged, un-

bulls. Horses, therefore, were always tethered on another street, and the spectators walked to the curbstone. Flivvers do not shy. They park along the line of march, jam intersections, honk and sputter and retard the procession. Mr. John gave up.

The circus has not suffered in the least by the abandonment of the parade. There are indications to the contrary. Kibitzers seem to have been discovered—curbstone parade watchers who never went to the circus grounds. But this finding is hardly demonstrable, so greatly has the radius of each performance been widened by the very motor which drove the parade from the street. Two capacity audiences (15,000 each) have been entertained in a day in a village of 400 population. John Farmer can now finish his evening chores, hop into his sleek or dilapidated car, and drive twenty, thirty, forty miles to the circus

road. When a group is trained, it is sold with cues to the most eager customer.

Equine mathematicians are trained to perform some simple motion, such as tapping with a forefoot upon a tub, just as doggedly as a pad horse trots around the ring. This he will do until his trainer moves. The trainer stands stock-still until the proper number of taps have been made and then, by moving hand or foot or head, signals the horse to stop.

ARE THE FREAKS BONA FIDE FREAKS?

For the most part, yes, though many a "wild man from Borneo" is an unusually vicious looking South Carolina Negro shrewdly capitalizing his queer appearance. The famous "missing link" so long and so profitably exhibited was actually an American Negro so peculiar in appearance that she could not support herself by any prosaic



packed, and raised again between midnight and midmorning.

A crew of sailmakers is constantly employed at Sarasota making tents. There are also wheelwrights, smiths, painters, and mechanics of all kinds repairing and building equipment.

Preceding the circus a day is the twenty-four-hour-man, the last purely business representative of Mr. John to call. He arrives in time to check up on the delivery of hay, beef, ice, bread, oats, sugar—all the commodities that the crew of 1,600 consume in three meals. He checks up on the condition of the grounds and the roads between the siding and the stand. Until very recent years he had also to make certain that the arrangements for the Monster Street Parade Daily, 3—Miles Long—3, were all in order. But the street parade is no more, and the twenty-four-hour-man has more time to sleep.

Hundreds of times Mr. John has been asked, "Why did you do it?" The answer is obvious. The Monster Street Parade Daily was pushed off the street by the home talent parade of Fords and Packards, Macks and Whites that is in every town in America. Horses always shied at the

grounds in time for the evening show, get home after it before cockcrow.

The question, "Why don't you have any more parades?" is the first new circus question that the inquisitive American has thought up in a good many years. Seemingly there is no other business that so provokes the curiosity of people whose it is not. Answers to some of these favorite questions have been secured and follow.

WHENCE COME RING HORSES?

Most pad and bareback horses come from barnyards in the circus's line of march. They are always shorter than average from shoulder to flank, and their backs must be wide. A good pad mount appears to the novice almost sway-backed. That sag in his spine is built up with resin and padding, protecting his back and making the rider's footing safer. Put into rehearsal in a line of trained animals who lope around the ring, he soon knows his business.

"High-school horses" are usually picked up just as casually, but not usually by the tramping circus. They are selected for intelligence and build by trainers who may never appear on the

means. Exhibited as a speechless subhuman, she was actually a very well educated woman, knew long passages of the Bible and much of Shakespeare by heart. When she died she left a ponderable estate.

The rather common assumption that all freaks are subnormal and greatly to be pitied is not well founded. At least two of the human exhibits in Ringling Bros. and Barnum & Bailey's side show are uncommonly shrewd, amply able to handle their affairs, and earning large incomes. In both cases their natural peculiarities are wilfully exaggerated, and impressive mannerisms are assumed for the benefit of the crowds that gape.

Freaks are bona fide freaks in a measure to begin with, and such lily-gilding as is resorted to is for the amusement of the onlookers, who would not have it otherwise.

HOW ARE THE FREAKS PROCURED?

Many a freak applies for admittance to the side show colony as another person would apply for a position as stenographer or salesman. Many are imported from such agencies as Hagenbeck's at

Stellingen, the groups of rare racial types that periodically tour the land usually coming in this way to the American circus. Still others are discovered and reported by fellow-townsmen, who commonly try to exact good commissions for their services. There is amazingly little mystery about the freak. He is, logically, holding down the job for which he is best fitted. He makes a good living and has, in most instances, far more comfortable surroundings than he could provide for himself otherwise.

DO ANIMALS BREED IN CAPTIVITY?

Some do and some do not. Members of the cat family are the most prolific, lions, tigers, and panthers frequently presenting their owners with cubs which may grow up to be of great exhibition value. But of elephant calves only two or three have been born and successfully reared in Amer-

bullocks, and twenty or thirty goats will set out from the base. They will travel 150 to 200 miles before they reach the giraffe country at about four miles an hour. One day they will sight a herd. In it there may be twelve animals. Of the twelve, perhaps six will be sixteen-foot-high adults, too old and too big to transport. Another three will have blemishes that make them worthless to the dealer. Of the remaining three, one or all may die of fright during capture, so delicate is the giraffe heart, so brittle its neck and legs. He cannot be trapped. He must be stalked and surrounded with infinite patience and care by men of long experience.

Presuming that good fortune has followed the party and some calves are captured, they are then carefully tied and loaded upright into bullock carts with high, fencelike sides. The corners are padded so that the giraffe may not injure

HOW MUCH DO LIONS COST?

To one who asks, "How much is a lion?" the only sensible reply that can be made is, "Show me the lion." However, the following prices are being quoted to circus men by animal vendors for beasts on the market this season:

Lions	\$600—\$1,500
Tigers	\$8,000 a pair
Black panthers	\$1,000
Jaguars	\$1,500 a pair
Leopards	\$350—\$1,500
Hyenas	\$175—\$400
Polar bears	\$600—\$750
Hippopotami	\$4,000
Elephants	\$4,000—\$4,500
Rhinoceri	\$10,000—\$12,000
Sea elephants	\$10,000
Seals and walruses	\$125 to \$600



ica. Such an event is so rare that upon the occasion of the birth of one calf at Barnum & Bailey's old winter quarters in Bridgeport, Connecticut, the medical fraternity attended in large numbers to witness the event. A peculiarity of elephant breeding is that if the calf is male, the period of gestation is sixteen months; if female, eighteen to twenty.

Monkeys, it is surprising to learn, very rarely breed in captivity. John T. Benson, Hagenbeck's American agent, certainly the largest monkey dealer in the United States, doubts if more than a half dozen monkeys were born in the country during the last year. All of the hundreds which he sells to circuses, zoos, pet shops, and research laboratories are captured in the bush.

HOW IS THE GIRAFFE CAPTURED?

No other animal, once he is located, is more difficult to capture and deliver. There is only one season of the year during which he may be captured at all. Just what that season is, no giraffe catcher will reveal. That is his trade secret.

At the proper time, a crew of perhaps forty beaters, a half dozen bullock carts, forty or fifty

himself on the return journey. Then the long trek home begins. The party cannot travel more than five or six hours a day without fatiguing the animals. At first the giraffe will fast. Then he will drink goats' milk with great relish. The giraffes are unloaded, untied, and allowed to exercise each night. They must be tethered, of course. But they cannot be tied to tree or stump. Instead one end of the rope is looped loosely around the animal's neck; the other is held in the hand of one of the beaters who sits all night beside his quarry. If the giraffe runs, the beater must run also. Had the animal been tied to a tree, his first leap might have broken his neck.

With similar patience the entire trip back to the base, across the ocean, and to the customer must be conducted. Any startling noise or sight will make the giraffe leap with fright and may cause his death. There was an instance in which the flash of a customs inspector's electric torch cost an agent a beautiful \$5,000 animal. In another, a prospective customer drew a handkerchief from his pocket with unnecessary flourish, the giraffe leaped, bumped his head on the top of the cage, snapped his neck, dropped dead.

Yaks	\$1,000
Zebras	\$4,000 a pair
Giraffes	\$4,500
Camels	\$1,500—\$2,000 a pair
Monkeys and apes	\$10—\$6,000
Kangaroos	\$280
Porcupines	\$30—\$100
Ostriches	\$100—\$400
Eagles	\$30—\$60
Storks	\$40—\$175
Penguins	\$225 a pair
Pythons	\$40—\$150
Cobras	\$400—\$500

WHAT BECOMES OF CIRCUS PEOPLE?

Frequently denied the security of insurance (the maximum policy for an animal trainer in a company which will insure him at all is \$350), having irregular employment, it is not easy to provide for old age independence. The Circus Saints and Sinners, a lusty and genial nationwide organization of circus fans and old troupers, is collecting an endowment at the present time looking toward the establishment of a circus folks' home probably in Richmond, Virginia.



PORTRAIT OF JOHN RINGLING—BY MABEL DWIGHT

JOHN RINGLING
1927

Portrait of Mr. John

The millionaire's charm with a fine flavor of strangeness.

HE may be at the Ritz playing bridge until dawn or he may be taking an English lesson." That was in answer to a question as to the whereabouts of John Ringling, youngest and last of the Ringling brothers, owner in sober truth of the greatest show on earth. It was a good answer. John Ringling is like that. He resembles no one in the world. There is no short word to describe him. He is neither a circus man, nor a Middle Westerner, nor a New Yorker, nor an art-collector, nor a railroad executive, nor an oil man, nor a German-American. The only title that covers him at all is the title of millionaire. If you use the word the way French writers use it when they talk about America—as though the millionaires were the two-gun figures of a new frontier, the spectacular successors of the old Wild Westerners—then John Ringling is the best millionaire alive. He has all the elements. He is an enormous, thick, powerful man with sad, heavy eyes and an arm like a wrestler's. He talks rapidly in a low voice. He smokes a great number of cigars, removing the butt between quick puffs of smoke and throwing half the length away. He dresses superbly. He has a vast fortune, one of the biggest in America, and he spends it magnificently on a Fifth Avenue home, a Venetian palazzo in Sarasota, Florida, a steam yacht, and a private car. He has millionaire diversions. He collects art. He bought \$50,000 worth of statues at the Metropolitan Museum duplicate sale, has collected more square yards of Rubens than any other private individual on earth has ever gotten together, and owns a few excellent pictures: an El Greco, Velásquez's *Maria Anna of Austria*, Rembrandt's *Evangelist* and *Descent from the Cross*, Raphael's *The Christ Child at the Well*. He houses his pictures in a private museum, 260 feet by 300 feet, built of marble especially imported from Greece, where it was quarried from ancient temples, and containing, in addition to the picture galleries, a large lecture hall with moving picture apparatus, a stage, a library, rooms for the numerous officials, a moat with living swans, and the tombs of Mr. and Mrs. Ringling.

His life and fame are perfectly in keeping with the background. He was a poor boy, one of a family of eleven, one of seven sons. His father's name was Rüngling. The family lived in McGregor, Iowa, and moved while John Ringling was small to Baraboo, Wisconsin. He and his six elder brothers started out together to tour the wild Wisconsin country as musicians. John played the bass viol. They kept at it until they discovered that people would rather watch a tumbler than hear the music of "Ringling Brothers' Moral, Elevating, Instructive & Fascinating Concert & Variety Performance." They added contortionists, a trapeze act, and a menagerie. The menagerie was a hyena. Then it was a hyena and a lion. Then it was a hyena, a lion, and a kangaroo. They played one night stands in the prairie towns, piled their tents and their belongings into wagons when the show was done, and drove all night in the mud or the clay dust of that endless country. John drove the lead team and laid the green branches across the wrong turns at the forks. Later, when their circus took to rails, John was the trans-

portation man. He knew the length of every railroad siding in the United States and could name the monotonous, identical Indiana towns by merely wiping the steam from the black windows of the car. The circus grew. The faces of five of the Ringling brothers slanted across the tattered posters of the little towns, and the cities began to hear their name. The great Bailey, like the King of Portugal, divided the world with them in self-defense. When he died, his widow sold them Barnum & Bailey's for \$410,000, and in 1909 they showed in Madison Square Garden in New York.

Later the elder brothers died, and "Mr. John" was left in absolute control, dividing the ownership with his nephew, Richard Ringling, and the widowed wife of Charles. He had purchased, in the meantime, railroad holdings, was the president of two small lines, had prospered in his oil stocks, and was worth in the neighborhood of fifty million dollars.

So far, it is the conventional millionaire's story, with a fine flavor of strangeness about the way in which the money was gained and a magnificent exaggeration about the spending of it. A millionaire's romantic charm lies in the contrast between the tooth paste by which he makes his money and the Botticelli that it buys, and there was never a more incongruous source of wealth than RINGLING BROTHERS, WORLD'S GREATEST RAILROAD SHOWS, REAL ROMAN HIPPODROME, 3 RING CIRCUS & ELEVATED STAGES, MILLIONAIRE MENAGERIE, MUSEUM & AQUARIUM & SPECTACULAR TOURNAMENT PRODUCTION OF CAESAR'S TRIUMPHAL ENTRY INTO ROME. Nor a more unlikely use of it than the purchase of Attic marble for a Florida museum of the arts. But John Ringling leaves the conventional story at that point. The rôle won't fit him. He has the size, the weight, the manner, the means, the power of the romantic figure, but the tune is all his own. Where the man of fiction would have the ox-felling arm and would have used it, laying out an entire gang of razorbacks at a stroke, Ringling never used it. There is no legend under the big tops of his battles or his rage. He is known as a cold and phlegmatic man. Where the hard-boiled, low-voiced, laconic man of fiction would have been famous in forty-eight states as a poker player, Ringling is famous for his bridge. Which he never plays for money. Where the fictional circus captain would have been feared and loved by his employees and called by some odd title, Ringling is feared, not loved, and called merely "Mr. John" to distinguish him from Mr. Otto, Mr. Gus, Mr. Henry, Mr. Charlie, Alf T., and Mr. Al. Where the man of fiction would smoke innumerable stogies, Ringling smokes innumerable denicotinized cigars. Where the book man would be notorious for his lavishness, his generosity, his women, and his parties, Ringling is noted for his domesticity. His parties are "at homes." His lavishness ends there also. And his generosity is not the attribute to which old circus men most commonly refer.

And, when all is said, Mr. Ringling is the more interesting figure of the two.



Oil photographs by Margaret Bourke-White

SPINDLETOP, WHERE CAPTAIN LUCAS STRUCK HIS GUSHER, AS IT LOOKS TODAY

BURLINGAME
PUBLIC

Petroleum

Too much, certainly, today. Too little, perhaps, tomorrow. Overproduction against a threat of an ultimate undersupply. How Producer and Refiner look at conservation.

THERE are few questions upon which it is easier to be sensational and harder to be scientific than the question of a natural resource and its possible exhaustion. A few years ago, for example, a good many talkers and writers about petroleum belonged to what might be termed the exhaustionist school of thought. Mr. Stuart Chase, to whom so many aspects of industry appear so contrary to the common good, was particularly alarmed about petroleum's future, and lent credence to wild predictions to the effect that oil would be worth its weight in gold in ten years. It is a little difficult to determine at just what point the man who gets petroleum out of the ground ceases to be a contributor to and becomes a despoiler of the nation's wealth. And even if all the petroleum were exhausted, it might seem that the resultant disappearance of the automobile and of all machinery requiring a mineral lubricant would be rather applauded by Mr. Chase and his fellow advocates of the simpler life. Nevertheless the tempting picture of a nation's oil reserves being recklessly squandered by selfish interests was vividly painted and prominently displayed.

Today, however, the alarmist attitude on petroleum conservation is seldom taken with great solemnity. Geologists will not say that the reserves of petroleum are inexhaustible, but they will say that such reserves are incalculable. In the first place, it is not possible to say how much more petroleum may come out of deeper "sands" in such oil fields as are already in production. In the second place, it is even less possible to predict when and where and how many new oil fields may be discovered. In regard to these first two considerations it can be said definitely only that economically worked reserves are constantly approaching the exhaustion point and that petroleum must come from foreign wells more and more in the future. In the third place, the manufacture of synthetic petroleum has reached a point at which it must be respectfully considered as a commercial possibility. All of which is not to say that the supply of liquid petroleum will last forever. It is not an argument against conservation; it is not an argument for unrestricted production. It does mean, however, that to set any date, whether it be 1980 or 2000 or 3000, for the disappearance of petroleum is to reach an unsound conclusion based upon nonexistent grounds.

No man's opinion is any good

Oilmen who are ardent conservationists say that the danger of crude oil exhaustion is not imminent. They do insist that, as our industrial civilization is now ordered, waste of oil is a high crime. The uses of oil as fuel in processes or regions where coal could be substituted at no increase in cost is the worst kind of folly, say they. For—and this is the central point in the entire argument—there is no method of making an intelligent estimate of the amount of petroleum still beneath the earth's surface, and, concerning coal we have been told by careful geologists that there is certainly an adequate supply

for 400 to 500 years. It takes only a few hundred acres to make an oil field, and one rich field will add another 100,000,000 barrels or more to the annual production. When the Seminole Field "came in," in 1927, the entire United States petroleum industry shifted from a state of underproduction to a state of overproduction. The possibility of another Seminole in 1930 is precisely as good as was the possibility of the original Seminole in 1927. No one can say how many more needles are left in the haystack; no one can predict, on any intelligent basis, how numerous or how rich may be the oil deposits that the Producer has not yet discovered. It is not so much a question of one man's opinion being as good as another's; it is more a question of no man's opinion being any good whatsoever.

And if this is the situation in the United States, where the search for oil has been most intensively conducted, it is much more the situation outside the United States, where, in many districts, men have hardly begun to draw upon the earth's resources. Here, indeed, the gaudy prediction is at least as sensible as the harrowing lament. Russia, for example, is commonly believed to contain oil deposits as extensive as those of the United States, and Russian oil production has been and remains insignificant. In Germany, long considered a negligible factor in petroleum production, a group of American oilmen has just leased 1,600,000 acres and enthusiastically predicts a Central European oil boom within the next five years. (For an account of German oil developments, see Appendix.) English, French, and American oil companies have settled the division and are now proceeding with the development of Persian oil fields. Here again the prophet is confounded by the same absence of a basis for prophecy; here again where the storehouse has not been discovered, its contents should not be guessed. Add to all these unknown elements the little known element of synthetic production through hydrogenation (see *Refining*), and it becomes sufficiently obvious that to set a specific limit upon petroleum's ultimate supply is not a very accurate or intelligent proceeding.

. . .

But, it may be argued, surely conservation has been an absorbing topic within the industry itself; surely the oilman has been talking nothing but overproduction for at least the past two years. The oilman, however, is likely to be thinking both of conservation and of overproduction not only in terms of a possible future shortage but also in terms of an undeniable present surplus. As soon as a theoretical discussion of what may happen to petroleum is succeeded by a practical consideration of what is happening to petroleum, the center of interest shifts to the 541,000,000 barrels of crude oil now stored above ground. Over this accumulated excess, a surplus amounting to a 190-day supply, the entire industry is divided into two sharply opposed factions. These factions may be defined as the Producers on the one hand and the Refiners on the other; and it is in some adjustment between their conflicting interests that the prosperity of the petroleum industry



MORE THAN 500,000,000 BARRELS OF PETROLEUM ARE STORED ABOVE GROUND

most immediately depends.

The Producer is the oil company that confines itself to getting the crude oil out of the ground. Producing companies are not necessarily small companies; their output may run up to 100,000 barrels a day, although this is a most exceptional figure. A 25,000-barrel output daily is high for a Producer, and his production may scale down as far as a fraction of a barrel daily. The essential characteristic of the Producer is not that he is small or large, but that he is interested *only* in getting oil out of the ground. He does no refining and therefore no transporting or marketing. There are in the country today upwards of 16,000 companies in the Producer class.

But there are only about 120 Refiners' companies. The Refiner is distinguished from the Producer in that his major interest lies in refining and marketing—that is, in the extraction of gasoline from crude oil, and the sale thereof. But the Refiner may be also a Producer, may also produce crude oil, and on an average does produce a great deal more crude per company than the Producer himself. He is, in other words, the big integrated company—drilling and refining and transporting and marketing and exporting—but always thinking of his business as essentially a gasoline business and usually with his refinery closest to his heart. All the Standard Oil group belong to the Refiners; so do Texas Corporation and Gulf Oil and others of the large independents. The 120 companies in the refining group produce about as much petroleum as do the 16,000 Producers' companies which live by crude alone.

But while these Refiners refine the 50 per cent of total crude production which they themselves take out of the ground, they also refine the other 50 per cent that comes from the drilling company. For of course nobody but a Refiner would have the slightest use for a barrel of crude. Therefore the only market that the Producer has for his crude is the large Refiner. Before the Producer's crude oil can drive any automobiles or lubricate any machinery, it must pass through the Refiner's hands. The Producer's product is valuable to a country with 120,000,000 inhabitants, but it is to less than one millionth of that number that he makes all his sales.

Roll of Refiners

The largest of these refining companies (and the chief purchasers of the Producer's crude) are according to Ralph Arnold and William Kemnitzer, geologists and authors of *Petroleum in the United States and its Possessions*, to be published this fall by Harper & Bros:

- Standard Oil Co. (New Jersey)
- Prairie Oil and Gas Co.
- Standard Oil Company (Indiana)
- Standard Oil Co. of California
- Standard Oil Co. of New York
- The Ohio Oil
- South Penn Oil Company
- Associated Oil
- The Texas Corporation
- Union Oil Co. of California

Gulf Oil Corp.

Marland Oil Co. (Continental Oil Co.) [Delaware]

Sinclair Consolidated Oil Corp.

Empire Gas & Fuel Co. (of Delaware)

These fourteen companies (in number about one-tenth of one per cent of the industry) refined, in 1929, more than 50 per cent of all the petroleum refined in the United States. Here is a concentration from which various differences of opinion are obviously bound to result.

Overproduction or oversupply

For the interests of the Producer and of the Refiner are not obviously identical. When the Refiner talks of conservation, the Producer says that he means restriction; and when the Refiner talks of overproduction, the Producer says that he means oversupply. The Producer argues that there is no such thing as overproduction in the sense that the country is producing more oil than it can use. In 1929 the domestic production was 1,005,000,000 barrels; the domestic demand was 1,009,000,000 barrels or 4,000,000 more barrels than were actually produced. Yet the surplus stock of crude (that aforementioned 541,000,000 barrels) showed during the year a 50,000,000 barrel increase. For in 1929 there were 79,000,000 barrels of crude imported from overseas and only 26,000,000 barrels exported, leaving a net importation of 53,000,000 barrels. It is, according to the Producer, this *imported* petroleum that causes the oversupply, an oversupply which the Producer regrets as keenly as the Refiner. And since there are two of the largest Refiners, Standard Oil (Indiana) and Gulf, together with one foreign company, Sir Henri Deterding's Royal Dutch-Shell combination, that do practically all the importing (mostly of cheaply produced Venezuelan oil), the Producer has a certain tendency to regard these companies with suspicion and to feel that a stoppage of Venezuelan imports would be one excellent method of reducing the amount of petroleum on hand.

Furthermore, the Producer often feels that the Refiner's suggestions for restoring an equilibrium between supply and demand, a suggestion exemplified by an all-around restriction of production, require him to make the greater sacrifice. Restriction is usually worked by means of prorating agreements in individual fields (since a nation-wide restriction might be liable to Government action under antitrust laws), agreements sanctioned by state laws in California and Oklahoma and under certain circumstances in Texas, whereby all the operators in a given field agree to hold down production to a specified percentage of capacity. But, say dissatisfied Producers, the Refiner gets the better of this arrangement, because when the Refiner cuts his production he can buy the Producer's crude and keep right on refining, whereas the Producer's crude is his little all and if he cuts his production in half he severs himself with the same stroke. "The cutting is common to all," says the Producer, "but we do most of the bleeding."

[Continued on page 122]

The Texas Corporation

It began on a hill in Texas. Now forty-eight states and fifty-one countries know Texas products. No man owns more than 2 per cent of its 9,800,000 shares.

THE corporate history of petroleum in this country obviously divides itself into two periods—the period before and the period after the Standard Oil Trust was dissolved by the United States Supreme Court. Perhaps that line of demarcation is not quite so sharply drawn as is commonly thought, since such non-Standard companies as Texas Company and Gulf Oil, had survived a decade of competition with the old Standard when the dissolution decision was reached in 1911, and since the tremendous expansion of the petroleum business as it developed from kerosene to gasoline would unquestionably have broken the old monopoly. At any rate, both by natural growth from below and by release of pressure from above, the industry split like one of its own molecules, and the independent oil company no longer worries through a precarious existence. Indeed, whether within or without the Standard group, there are few petroleum organizations today more thoroughly integrated, more firmly established, or more rapidly expanding than Texas Corporation, a company which, starting twenty-nine years ago in a gusher on a Texas hill now markets its products (as does no other company) in all forty-eight states of the Union and in fifty-one countries of the world.

The Texas Corporation ranks fifth in the production of petroleum and sixth in its refining, producing 4.4 per cent of the country's crude output and 6.7 per cent of the gasoline. Four of the old Standard companies (New Jersey, Indiana, California, and New York) are larger; so also, in production, is Gulf Oil. But Texas has

a greater net income than Gulf; besides, the Gulf company, almost entirely owned by the Pittsburgh Mellons, is not seen through Texan eyes as truly an independent. In 1928 the Texas Corporation earned \$45,073,879, about \$9,000,000 more than Gulf, nearly \$5,500,000 more than Standard of New York, and only about \$800,000 less than Standard of California. Most striking earning statistic, however, was perhaps the rate of return on investment. Texas Corporation showed on its average net investment a return of 13.2 per cent—a rate exceeded among the larger Standard companies only by Standard of Indiana, and by far the highest rate among the independents. And, finally, from the important standpoint of expansion, Texas Corporation in 1928 invested in its business (particularly in new land and in added refinery equipment) some \$62,000,000 and in 1929 floated an issue of \$100,000,000 Gold Debenture Bonds. This issue—a great financing in a year of great financing—was immediately sold.

The genesis of the Texas Corporation is found in two widely separated districts—the territory around Port Arthur, Texas, and the territory around Olean, New York. It was near Port Arthur that the first great Texan oil gusher was brought in, and at Port Arthur is located today the main Texas Corporation refinery. But Texas Corporation's President Ralph Clinton Holmes and many of the men who have been associated with him came from in or around Olean, New York, site of a large Standard Oil refinery in the

days when the Pennsylvania fields were the center of the petroleum industry. When petroleum shifted to the South and West, many petroleum men traveled along with it, and these northerners became known, generically, as "Oleanders," though many of them were never in Olean itself. Meanwhile it is with the Port Arthur region—busy, bustling, and never more prosperous—that the story of Texas Corporation should begin.

The Port is named not for the famous naval battle in the Russo-Japanese War, but for Arthur Stillwell, once head of the Kansas City Southern Railroad, who selected the site as the southern terminus of a road from Kansas City to the Gulf. It is about fifteen miles from the coast (a lake and a canal make it a "port") and about one hundred miles northeast of Galveston. Mr. Stillwell bought the low-lying, mosquito-cursed tract with no pre-vision of petroleum. A soil-taster, munching the rich Port Arthur mud, had told him, truly enough, that the ground was ideal for rice growing, so Mr. Stillwell founded the Port Arthur Rice Farm, which in a few years showed profits of more than \$2,000,000. Meanwhile, however, in nearby Beaumont, a group of oilmen had become interested in the possibilities of a hill known as Spindletop. Situated about halfway between Beaumont and Port Arthur, Spindletop was renowned for its inflammable gas springs and was a favorite resort for picnickers who took an unsophisticated pleasure in demonstrating that rivers can be set afire if there is enough natural gas in the vicinity. The Beaumont men realized that where there was so much natural gas there was likely to be some petroleum, so, in 1900, they formed the Gladys City Oil Company (Gladys was a Beaumont belle) and started drilling on Spindletop hill. In charge of drilling was one J. F. Lucas, geologist, wildcatter, and at one time a captain in the Austrian Army.

In spite of its burning waters, however, Spindletop at first showed no oil and Captain Lucas' backers, their limited capital exhausted, were about to abandon their shaft at a depth of about one thousand feet. Captain Lucas protested, was overruled, gave reluctant orders to abandon drilling. Then, at the most melodramatic of eleventh hours, Spindletop came in. The derrick man, perched high over the top of the well, was actually hauling up pipe when the earth shook, the pipe trembled, and the derrick man, sliding down a guy-rope, barely eluded an eruption of petroleum which shot pipe sections through the roof of the derrick and lifted the whole mass of wreckage high in the air in a black fountain of muddy foam. Day after day the gusher roared on while a tidal wave of



U. & U. THE LATE JOHN WARNE GATES
FINANCIER AND PRESIDENT OF TEXAS CORPORATION



RALPH CLINTON HOLMES

petroleum spread over the countryside. A \$10,000 reward was offered to the man who could plug the oil-volcano; it was only when a deep sea diver from Galveston was called on that the mouth of the well was finally closed. The Lucas well at Spindletop was one of the greatest gushers in petroleum's history; the vision of every prospector was here realized to the full.

Spindle and Swindle

Beaumont and Port Arthur became boom towns overnight. Spindletop and the land around it blossomed with derricks, and here was one oil field where few shafts proved ever dry. But it takes much more than an oil well to make an oil company. The little mushroom organizations, even when honestly intended, lacked facilities for refining and for shipping. Around Port Arthur crude oil became a drug on the market, sold as low as three cents a barrel. Oil stock buyers found in "Swindletop" a new name for Captain Lucas' strike. Finally, Spindletop became a settled producing field, and the prospectors, including Captain Lucas, had moved on to other and newer fields. Only two important surviving companies remained. One was the J. M. Guffy Oil Company, which later became part of Gulf Oil Corporation, the other was the Texas Fuel Oil Company which became in 1902 the Texas Company, with 119 stockholders and a capital of \$3,000,000. At that time the desirability of acquiring additional oil lands in the nearby Sour Lake district had become apparent. But where the Guffy Company went into the hands of a dynasty and is now and presumably forever a Mellon concern, the Texas Company went into the hands of an individual whose heirs and assigns are no longer dominant factors in the company's control.

This individual was John Warne Gates, commonly known as Bet-a-million Gates. Mr. Gates really did not go around betting millions, although he and Mr. Charles Schwab are said

once to have settled a \$20,000 issue by tossing a penny. Well earned, however, was the nickname, for Mr. Gates was essentially a gambler. He would bet on which of several raindrops would first reach the bottom of a window, or whether a black-and-white tiled flooring would have more black or more white squares. His American Barbed Wire Company was an important constituent of the original U. S. Steel Company, but Mr. Gates was considered a bit fast by the steel company's controlling organizers, and no steel director did Mr. Gates become. It was after he had left New York, somewhat disappointed and disgruntled, and settled in Chicago, that he heard about the young Texas company and took an interest in it. He died in Paris in 1911 (after having made more money out of Texas oil than out of all his market promotions) and left his widow and son to manage his fortune. His son, C. S. Gates, died in 1913, Mrs. Gates in 1918, and eventually the Illinois Merchants Trust Company of Chicago and Mr. Augustine L. Humes of New York became executors and administrators of the Gates estate. The Illinois Merchants Trust was John J. Mitchell's bank, which, after Mr. Mitchell's death, was absorbed by the energetic young Reynolds brothers from Des Moines and is now part of the merged Continental Illinois National Bank & Trust Company.

Today no bank and no banker control the Texas Corporation. It has more than 65,000 stockholders, no one of whom owns as much as 2 per cent of its 9,800,000 shares. Its operating executives include five of its thirteen directors and five of its eight executive committee members. The largest block of stock is held by a trustee for the company's employees who purchase shares on a deferred payment plan.

Out of Olean

Turning from the corporate to the personal side of the Texas Corporation, the story shifts

back again to the New York-Pennsylvania-Ohio petroleum centers and to the already mentioned Oleanders. Joseph Stephen Cullinan, first president of Texas Company, was born in Sharon, Pennsylvania, worked for the Standard Oil Co., putting up tanks in Ohio, and went finally to Texas. While in the Corsicana, Texas, fields he became associated with T. J. Donoghue, now a Texas Corporation vice president, who had formerly worked at Bradford, Pennsylvania with the National Transit Company. Mr. Holmes himself grew up in Olean, where one of his brothers is now a bank president. Two other brothers are with Mr. Holmes in the Texas Corporation, W. K. Holmes as head of the main refinery at Port Arthur and Luther R. Holmes as vice president of the Texas Company, California. And many another Texas Corporation executive is a man whose first acquaintance with petroleum was made during its New York-Pennsylvania-Ohio period.

Possibly the early training of these men (most of whom were interested in the refining more than in the producing end of petroleum) has contributed to the tradition of efficient refining which has always marked the operations of Texas Corporation. Certainly it has been in refining that Texas Corporation has particularly excelled. It was while Mr. Holmes was in charge of the refining department that he and F. T. Manley, now a vice president, worked out the Holmes-Manley cracking process—a process so efficient that the Texas Corporation not only uses Holmes-Manley batteries in its plant today but has licensed the process, on a royalty basis, to many other companies. The average yield of gasoline is (throughout the industry) 38 per cent of crude. In 1928 the Texas Corporation averaged 43.8 per cent, and in 1929 increased this figure to 48.3 per cent, or 10 per cent better than the industry's average. Remembering that in 1929 Texas sold 30,459,598 barrels of gasoline and that the difference between 38 per cent

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ON THE TEXAS CORPORATION ISLAND OFF PORT ARTHUR

Prospecting

PETROLEUM is found in Nature's graveyards, in the cemeteries where the earth has buried its geologic dead. It was once organic matter, mostly vegetable but sometimes animal, and usually microscopic. After it had made the change from organic to inorganic existence (which is more commonly known as the change from life to death), its fragments were picked up by prehistoric rivers and washed into the prehistoric seas. Then came the recession of the oceans, a recession in which many bodies of salt water, cut off from the parent sea, were left to go through a long process of drying up—like Salt Lake and the Dead Sea today. Finally these oceans became only the beds of oceans, and the earth covered them up with layer upon layer of sand and rock. During this process, and under the tremendous pressures incident to it, the bits of vegetable and animal matter at the bottom of the dried-up ocean were squeezed together and formed either the natural gas which always accompanies an oil deposit or the liquid which constitutes petroleum. Erosion and the earth's movements have so shifted the oil-bearing formations that now oil sands may be encountered at almost any depth. In the United States oil was first struck at 69½ feet; now in the most recent California oil fields, oil sands have been struck most frequently between five thousand and eight thousand foot levels.

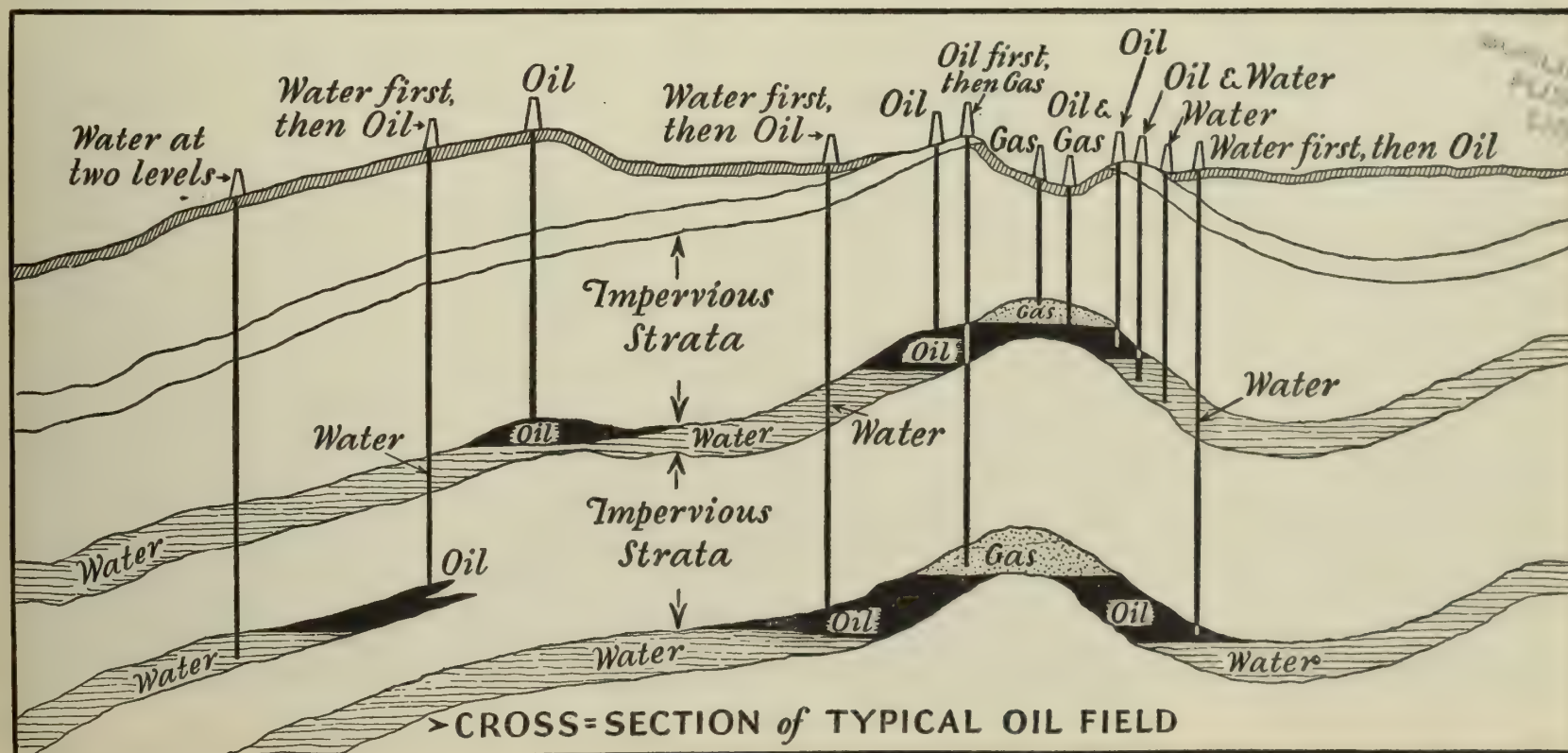
When, therefore, the oil prospector goes prospecting, he looks first for signs on the earth's surface of a dead ocean below. The chief surface sign is the outcropping of the rocks which formed the original bed of that vanished sea. The prospector knows that the floor of this basin, which was once under water and is now under ground, is not smooth and regular, but that at

various points along its surface it has puffed up into mounds or domes and that it is in these mounds, which may be described as underground pockets, that the oil-bearing sands are found. He therefore starts his drilling at the center of a dried-up ocean and aims his drill at a point where he trusts that a hidden oil pocket may lie.

When surface indications are lacking or vague, the simplest method of getting sub-surface information is obviously enough the drilling of a well. In all new fields the first well is a test well from which the prospector hopes for little more than samples of the earth. An examination of these samples describes to him the rock formations he is penetrating. But most important to the modern prospector are various detecting instruments such as the seismograph. The seismograph detects earthquakes by tracing on a strip of film the vibrations among the rock strata disturbed by the earthquakes' rumblings. The oilman manufactures his own earthquake by setting off a charge of nitroglycerine on the earth's surface, and tracing, on the seismograph, the progress of the sound waves as they go underground and are reflected from the various kinds of rock far below back to the earth's surface. The greater the density of the strata covered by the sound wave, the faster the progress of the wave. Perfection of the seismograph in the last year or two, so that it will report conditions ten thousand feet below ground, have radically altered the oil geography of the world. It should be emphasized, however, that all the seismograph, the torsion balance, or any other instrument can do is to give the prospector a description of the rock formations in which he is working. Every condition necessary for the presence of oil may be discovered, yet the oil itself may have drained off or evaporated. Sometimes the driller strikes natural gas, but finds no oil upon deeper drilling. Sometimes he finds the oil sands with no oil in them, and on further drilling discovers nothing more valuable

than the salt watery remains of the old ocean. Incidentally, oil wells do not go dry—they go to water instead. In some portions of Mexico a well may "go to water" overnight and the unfortunate driller wake up some morning and find that where he was an oilman yesterday, he is a water man today. In this country, however, the oil wells decline more gradually and their dwindling output gives the driller ample warning of their shortening life.

The chances of striking a sand vary so much that it is very difficult to estimate averages. It is agreed that even in proved fields with the most modern systems of drilling, one well in three is a "dry hole." It is possible, of course, to miss oil by a few feet, and, indeed, some obsolete methods of drilling actually dammed up the oil away from the hole. During 1929 wildcatters sank from five thousand to eight thousand holes in unproved territory. And ninety-six times out of one hundred no oil was found. But the wildcatter (and there are thousands of them) searches endlessly for his El Dorado, always with the elusive vision of another Spindletop or another Seminole Field leading him on. It has been said that more money has been sunk in oil wells than has been taken out of them. On the other hand an oil well coming in at ten thousand barrels a day means a daily income of about twelve thousand dollars. So not only individual prospectors but the great oil companies (who are today the most confirmed wildcatters) continue to stick their pinholes in the earth's surface. And in justice to the wildcatter, that unregenerate individual who is so deaf to restriction of output and conservation of petroleum, it must be said that the petroleum industry today owes nearly all its spouting gushers, nearly all its richest fields to the "Dry Hole Jims" who go out into the desert or their own backyard with a little borrowed money in their pockets and a lot of gambler's optimism in their hearts and dig patiently and forlornly with a wild wish in their minds.



Drilling for Oil

And why it is wise to eat your dessert first.

MANY of the most basic activities of civilized man involve a gouging of the earth's surface. Man scoops up the earth to make foundations for his houses. He scratches the earth to plant his crops. He dips into the earth to extract gold and silver and iron. In the earth he digs the graves of his dead. Wherever civilization has traveled, the earth's surface shows the scars of its passage.

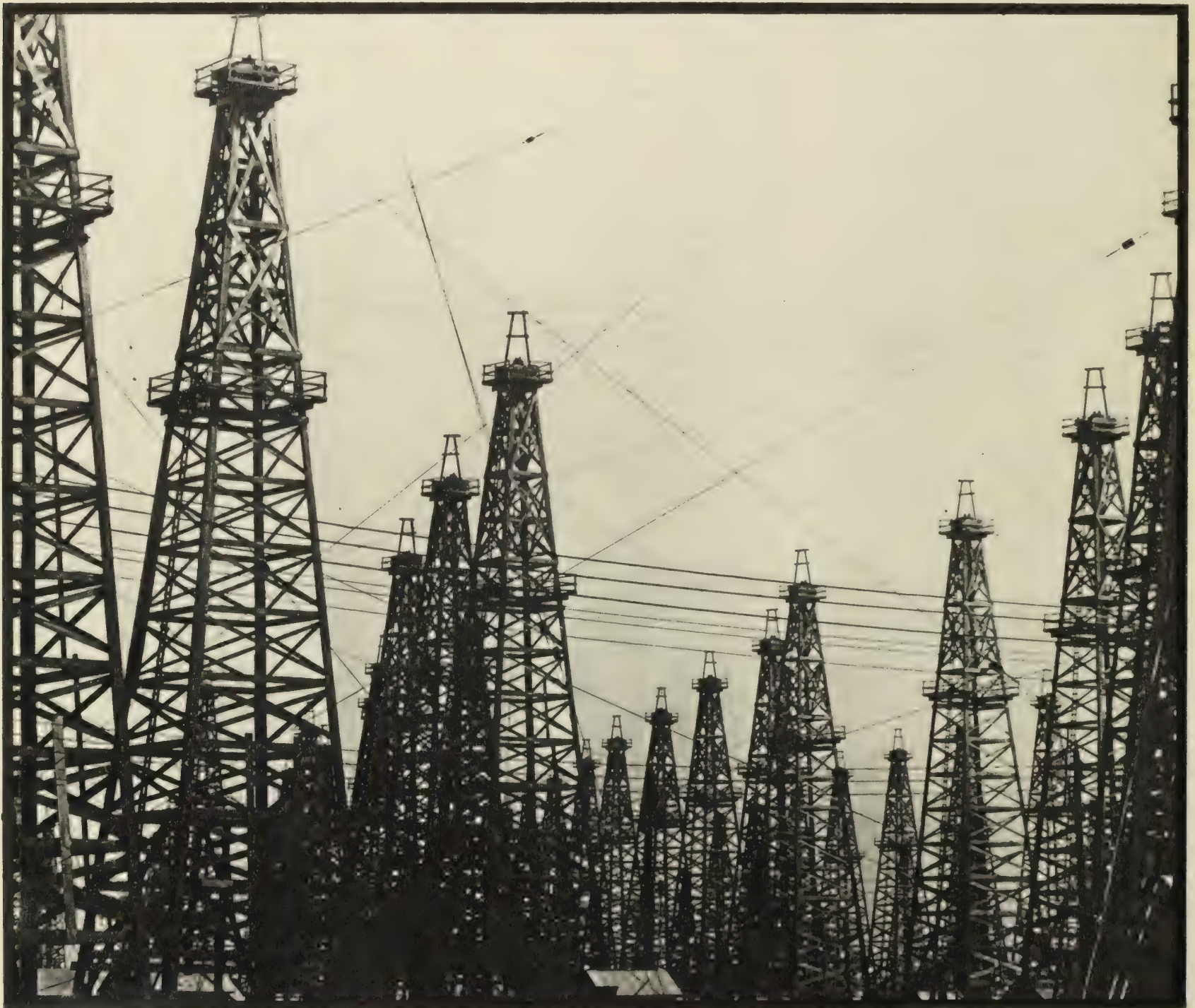
One of the most recent punctures that man has learned to make in the earth's crust is the oil well. It is one of his deepest and narrowest penetrations, and he himself never explores its bottom.

An oil well is like a giant post hole, not much more than a foot across but from a few hundred feet to over a mile and a half deep. The first well ever drilled, at Titusville, Pennsylvania, struck

oil at 69½ feet; today wells of eight thousand feet deep are not uncommon.

Travelers through the muddy oil districts, noting hosts of closely clustered derricks, each with its hundred spidery feet of steel or timber, might imagine a teeming underground life. But there is no activity in the well except the drill pipe with a drill screwed on to the end, twisting and boring its way down through successive layers of rock to the thick, black, evil-smelling muck that is now latent energy and will soon be transportation or heat or light.

The drill itself is a heavy piece of carbon-hardened steel culminating in a cutting blade. One common form of drill is the fishtail, shaped as its name indicates, and particularly efficient in cutting through softer rock. The most modern drilling is performed with a rotary drill, which spins as it bores, and might be compared to a



ANOTHER VIEW OF SPINDLETOP'S CROWDED DERRICKS



UNDERWATER DRILLING IN A LOUISIANA BAYOU

propeller except that it revolves not through air or water but through sand and rock. Though the drill is made of the toughest steel, it has to be frequently resharpened or replaced. Sometimes this happens every few hours, and it may take six or eight hours to pull up the pipe.

When the drilling begins, the drill is at the down end of an eighty-foot pipe length made up of four jointed smaller sections. The reason derricks are one hundred feet high is that they must be able to accommodate these eighty-foot pipe sections. Power is applied through a steel plate (the rotary) which is bolted to the derrick floor and has attachments which grasp the pipe firmly. It revolves in a horizontal plane, imparting the necessary rotary motion. From pits near the top of the hole, mud is pumped down through the hollow of the pipe. This mud, coming out at the lower end, softens the surface on which the drill is working and washes the drill cuttings to the surface. As it squeezes up (under considerable pressure) along the outside of the pipe, it strengthens the well walls and so helps prevent cave-ins. Mud is the all-pervasive element in the oil districts; muddy creatures in muddy hip boots wallow eternally in mud. So far, so simple, and if oil wells were only as deep as one section of piping, drilling them would be a matter of no great moment.

But the oil may lie six or seven or eight thousand feet below the surface, and obviously impossible would be the handling of an eight-thousand-foot stretch of pipe. When, therefore, the first eighty-foot length has nearly disappeared beneath the earth's surface, another shorter section is clamped to it. As the well becomes deeper, additional sections are added. At eight thousand feet, for instance, the drill at

the end of the first pipe length is at the end of a pipe chain composed of perhaps four hundred links, each about twenty feet long. The oilman refers to this pipe chain as his "string of tools."

Whenever the drill is changed, the whole string of tools must of course be hauled up, jointed, and again put down and reconnected. The raising and lowering is supervised by the driller, who stands by the steam engine to operate the drill. He is aided by a derrick man, strapped high up on a little platform near the derrick's top. Three "roughnecks" handle the pipes and the connections from the derrick floor. Sometimes a section of piping twists off inside the well. Sometimes a section, hauled to the surface, slips and falls to the well's bottom. In both instances the driller lowers one or another of a variety of "fishing tools," poking around in the hole until he has located the truant pipe, grips it, and hauls it in. The driller is a highly skilled angler who has developed a sense of touch and a judgment of distance that makes him seem almost endowed with the ability to look down the well and spy out the stray section of his broken pipe. When everything is going well and the drill is sharp and the thread of piping has not dropped any stitches, the drill crew loafs on the "lazy bench." But when accidents happen, and they happen so frequently and inevitably that they can hardly be called accidents, the five men are in for a job that is hard, dirty, and fast. It is a standing jest with drillers that they always eat their dessert first lest an emergency call come before they have finished eating.

It must also be remembered that an oil well may be such in name only. Even on proved oil

lands, even with all possible elements of chance removed, about one oil well in three is a dry hole. Underground rock formations have a way of dipping and lensing that upsets the calculations of even the best geologists. Furthermore, no one can tell at what depth the well may come in. It is even possible to drill straight through a large oil deposit without knowing it, and sometimes small deposits are purposely ignored in the hope of reaching a richer treasure at a deeper level. When the driller thinks he may be nearing a sand, he cores out a specimen of the rock and brings the sample to the top for examination. Sometimes these cores are sent to paleontologists, who submit them to an elaborate microscopic analysis to see if their composition indicates the proximity of oil. The presence of certain characteristic fossils is the best indication. Often the driller himself looks over the samples with an eye that may be empirical and unscientific but is nevertheless extremely piercing, and makes his own decision without benefit of scientists.

When, or if, oil is finally located, it usually does not spout up in a great fountain, although spouting wells, or gushers, have long captivated popular imagination. Sometimes the oil has behind it only enough pressure (from gas or water) to bring it to the surface; sometimes it has to be pumped up. Very often the bottom of the well is dynamited ("shot" with nitroglycerine) to break up the rock formation and facilitate an easy flow. Then the bottom is lined with a perforated pipe which lets the oil through but keeps the sand out, and the top of the well is closed with a gate valve, commonly known as the "Christmas tree," to regulate the outflow. From the "Christmas tree" the oil is piped into temporary tanks,



HOW A DERRICK LOOKS FROM THE BOTTOM UP

whence it travels to the refinery over the pipe trunk lines.

When the oil is standing in the well in a condition of equilibrium, natural gas is frequently pumped in to renew the pressure and force the oil to resume its flow. Other rejuvenating methods are now used extensively and keep many a well producing profitably, which a few years ago would have been abandoned as barren.

While the initial daily average production of all new wells is rarely more than three hundred barrels, the average yield of all producing oil wells, new and old, is about 7.6 barrels a day. A big well may come in at ten thousand or more barrels a day and mean an easy profit of as

much as tens of thousands of dollars daily. Remembering that less than 3 per cent of all oil wells produce over half the oil and that no one has the slightest notion of how long even the largest well may last, the difficulties of "stabilization of the industry" become obvious. One new flush field, or even a few new gushers, will produce enough oil to create a serious disturbance in the ratio between production and consumption. On the other hand, with so many wells turning out to be nothing but dry holes and so many others producing hardly more than a trickle of oil, every producer searches continually for the rare and elusive gushers on which his prosperity depends. And finding a rich pool,

he must drain it as far as possible, lest others holding nearby leases offset his wells and seize the subterranean spoils, for oil belongs, legally, only to him who brings it to the surface, not to him whose land is directly above it.

So the drilling crews go out into the fields and make their little pinholes in the earth's surface. They drill perhaps twenty feet, perhaps one hundred feet a day, and may spend from ten dollars to as high as thirty dollars for each excavated foot. A recent California well reached a depth of 9,280 feet, showed no signs of oil, is being driven still deeper in the hope that oil will yet be found. Well costs range from less than \$2,000 to more than \$500,000, but probably average about \$25,000.

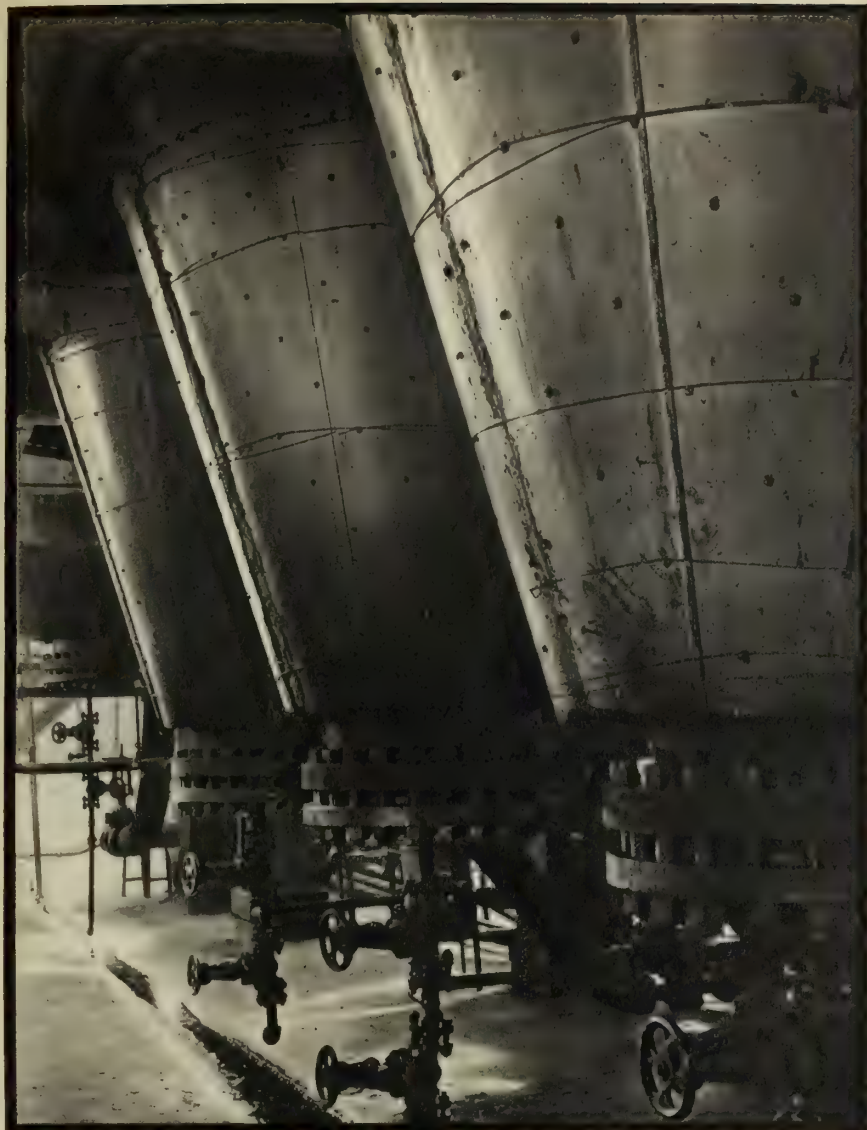
All the larger companies have wells in most of the major producing fields. The Texas Corporation, for instance, has about seven thousand wells in this country, deriving about a third of its crude production from the various Texas fields, another third from the rich California pools, and about half of the remaining third from Oklahoma. The final one-sixth is divided up chiefly between Louisiana, Arkansas, Kansas, Colorado, Wyoming, Montana, Kentucky, New Mexico. Geologists have long predicted "only five (or ten) billion barrels more oil left"—in the last few years that much and more has been produced and the end is not yet in sight.

A closely drilled field, such as Signal Hill or Long Beach in California, is a remarkable sight with hosts of derricks spaced only a few feet from each other and sprouting upward like some dense and unnatural forest. One of the worst problems of the driller is getting a straight (i.e., perpendicular) hole, many a well that is six thousand feet deep terminating three thousand feet to one side of its opening. Where derricks are jammed together, wells frequently run into each other and in Signal Hill, for instance, a driller may well be churning through his neighbor's drill mud and may well strike his neighbor's oil. But deviations from the vertical are usually unintentional, and many rich deposits have been lost by the drills following the line of least resistance and sliding along the angle of a rock formation which it was aimed to penetrate.

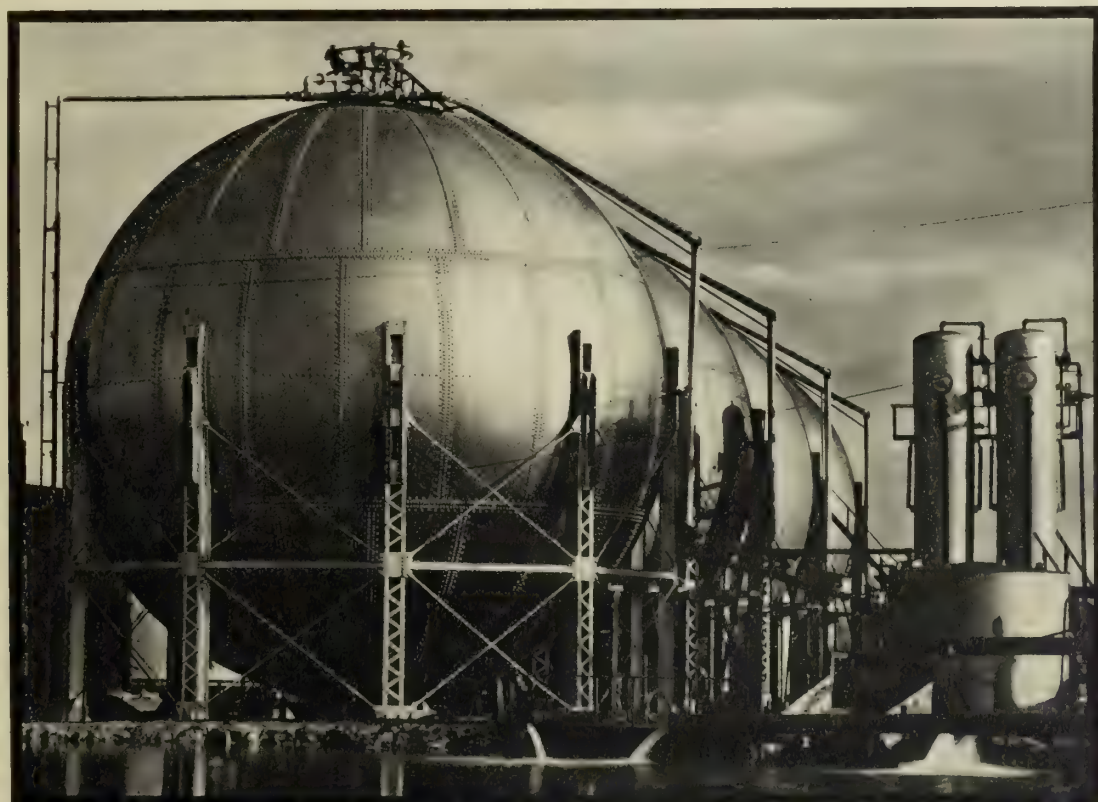
Some idea of drilling operations in a well-proved field can be obtained from a review of production statistics in one such area—the Long Beach field discovered just outside Los Angeles in 1921. In 1921-28 inclusive there were 1,646 wells drilled in Long Beach. All except 234 were productive and yielded 321,104,000 barrels of crude, or nearly 11 per cent of all California oil produced in that period. There were 1,200 acres of proved ground, the average yield of an acre has been 267,000 barrels, and the average cost of a well, \$76,500. An oil well usually lasts about fourteen years, gives as much oil in its first year as in all the rest.

In 1859, first year of oil drilling in this country, two wells were completed. Since that time nearly 800,000 have been sunk. In 1928 there were 22,331 new wells completed, of which 56 per cent found oil, 12 per cent found gas, and 32 per cent were dry. The outstanding tendency in drilling has been toward constantly increasing depth—from an average 1,500-foot depth in 1910 to the present *deep drilling* with its many 6,000, 7,000, and 8,000 foot wells.

Refining



HERE BIG MOLECULES ARE MADE SMALL



A HORTON SPHERICAL TANK FOR STORAGE OF COMPRESSING GASOLINE

THERE are in petroleum only two elements—carbon and hydrogen. But although petroleum is simple in its constituents, it is complicated in its structure. Its carbon and its hydrogen have combined with each other in so many different ways and have formed molecules of such varying number and proportion of carbon and hydrogen atoms that gas and gasoline and kerosene and fuel oil and lubricating oil all come out of the same black, sticky substance that men probe the earth to find. In the early days of petroleum, that mixture of carbon and hydrogen which made kerosene was the most important constituent, so that the process of refining petroleum was chiefly a process of extracting the kerosene molecule from its lighter and its heavier brothers. Many refiners used to dump their gasoline into rivers and harbors until the Government protested against the resulting fire hazard. Even in the early days of the automobile, the importance of gasoline was only dimly recognized, one early motor car manufacturer being offered all the gasoline he wanted at the cost of paying its transportation charges. So it was a kerosene trust that old John D. Rockefeller formed and operated, and it is interesting (although idle) to speculate what might have happened if, after gas and electricity had superseded the kerosene lamp, the automobile had not arrived to give petroleum a new and tremendously greater market.

But of course the automobile did come, the center of petroleum interest did shift from kerosene to gasoline, and it is as a fuel supply for the nation's 23,000,000 automobiles that petroleum is now a national asset. For at least the last fifteen years the refiner has concentrated almost exclusively on the problem of how many gallons of gasoline can be extracted from a forty-two gallon barrel of crude.

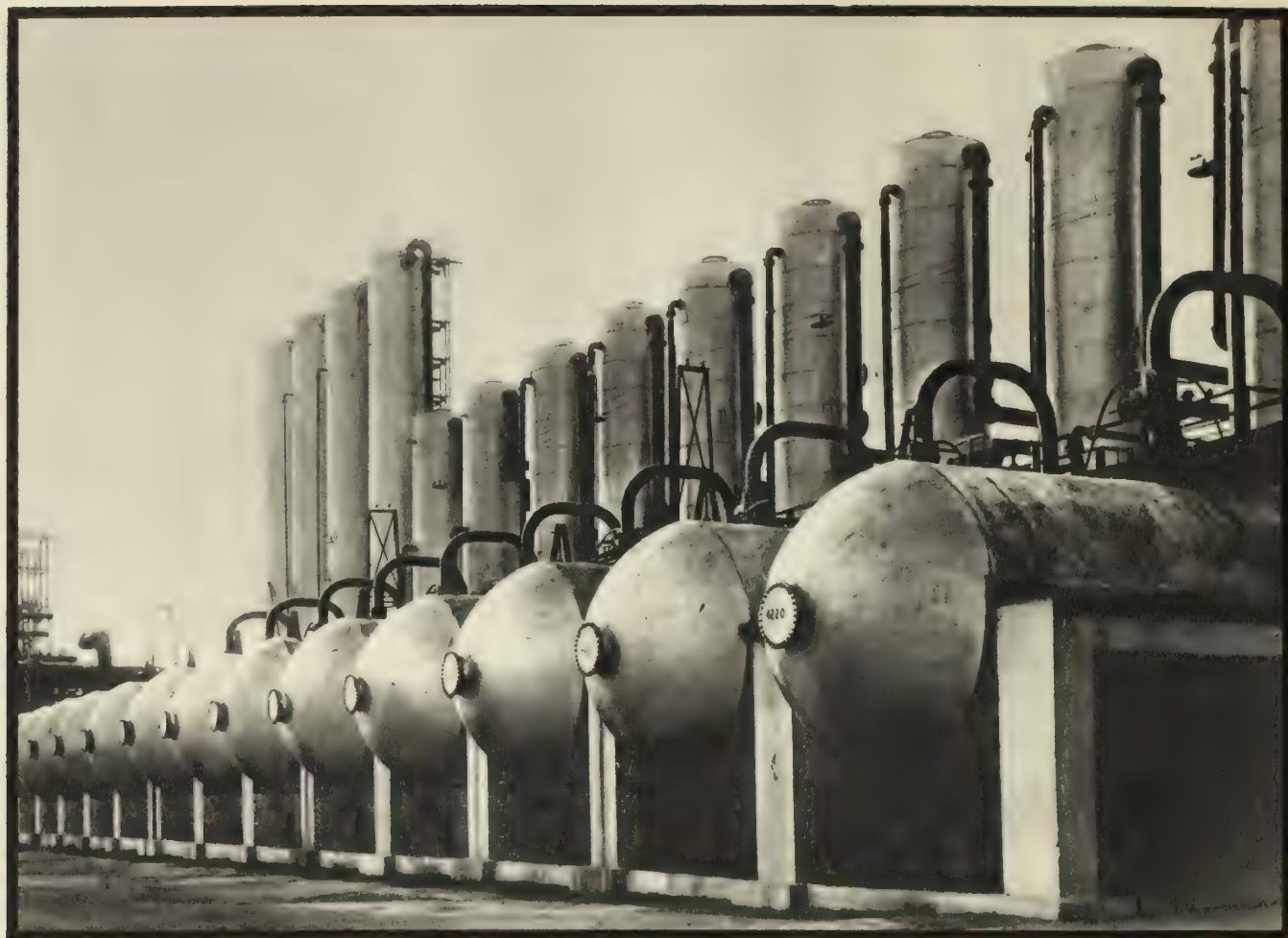
This process of extraction may be separated into two divisions—natural refining and forced refining. Natural refining is a comparatively simple process of distillation. If you put a mixture of alcohol and water in a kettle and apply heat, all the alcohol will boil off before any of the water boils off, because alcohol, more volatile than water, has a lower boiling point. The same principle applies to the various types of molecules of which petroleum is composed. When crude oil

is heated, the lighter molecules—those with a higher proportion of hydrogen—are the first to vaporize. The first substance to be given off is the natural gas contained in the oil. Next comes the gasoline, then the kerosene, then gas oil, then the lubricating distillates. After the boiling-off process is completed, depending upon the degree to which it is carried out, there is left in the still fuel oil, asphalt, or coke, or, in the case of certain high grade crudes, cylinder stock is the residue.

As the distilled vapors are given off from the boiling oil, they are run through a system of water-cooled pipes in which they are again condensed into liquids. The liquid distillate is run through a "run-down" house. In the run-down house are what is known as "look boxes," which are simply metal inclosures equipped with windows. A "still-man," looking through the look box, can tell by the size and the color of the liquid stream, and also by frequent sampling of it, when it is time to decide that what is going through has ceased to be gasoline and has become kerosene. This line of demarcation is of course variable, and gasolines differ sharply according to their "end points." The distillation, or straight run, refining process turns about 25 per cent of the crude oil into gasoline.

But the average gasoline yield today is not 25 per cent of crude, but about 38 per cent of crude, the extra 13 per cent resulting from what is called "cracking." The cracking process is based upon the fact that the heavy molecules of

CONTINUOUS
STEAM STILL—
25 PER CENT OF
GASOLINE
FROM CRUDE



HOLMES-MANLEY
CRACKING
UNITS—48.3 PER
CENT OF
GASOLINE FROM
CRUDE

petroleum—those molecules made up of a great many atoms of carbon and hydrogen, and which are also the involatile molecules which would ordinarily be turned into fuel and lubricating oils—will, when subjected to sufficient heat (about 825 to 925 degrees) and pressure, crack up into lighter molecules. The percentage of gasoline molecules that are thus split off varies with the efficiency of the various cracking processes.

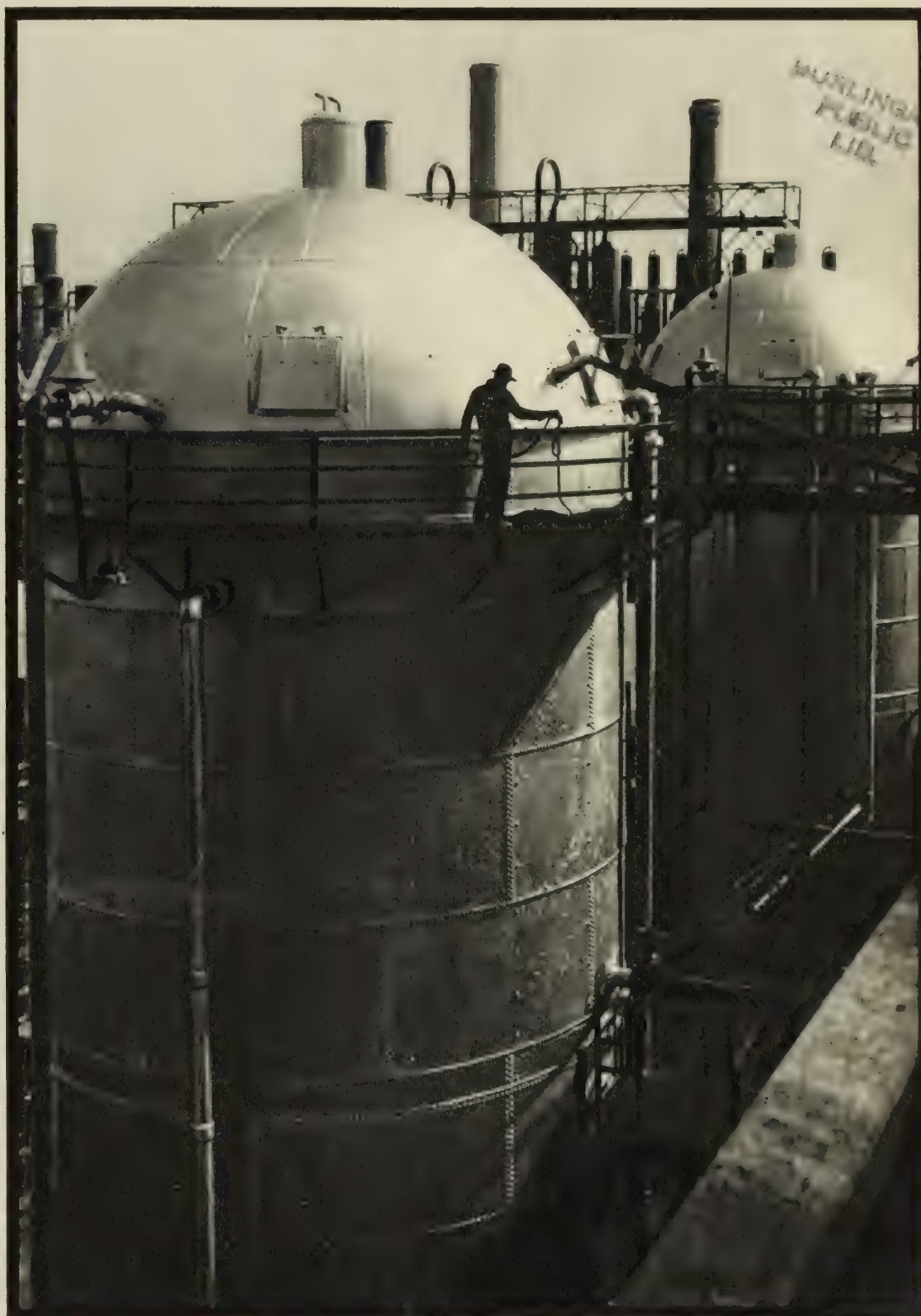
The Texas Corporation has probably the most efficient cracking apparatus in the petroleum industry, and from its barrels of crude gets between twenty-two and twenty-four gallons of gasoline, considerably better than 50 per cent. President Ralph Clinton Holmes and Vice President Frederick Thomas Manley are co-inventors of the Holmes-Manley cracking process, which the Texas Corporation has leased, on a royalty basis, to many other refiners. At the Port Arthur refineries are two long rows of Holmes-Manley batteries, each including four cracking chambers five feet in diameter and forty feet high. These chambers are built to withstand operating pressures upward of four hundred pounds to the square inch, and are fabricated by the electric welding of steel plates to form the desired shape. They look like four-story brick tenements with three rows of galvanized iron porches, and represent an investment of nearly \$15,000,000. So great are the cracking pressures that pipes in the Holmes-Manley batteries have no joints, but are painstakingly bent around corners. In spite of the time and the money invested in cracking stills, no one knows better than the Texas Corporation that its Holmes-Manleys are bound to become obsolete, nor is any company more actively experimenting with new, or more ready to scrap old, machinery. It is the refiner, not the producer, who makes the money in the oil business, and Mr. Holmes and many of Texas Corporation's executives and managers in the past were oilmen from back in the days when the oil fields of Pennsylvania and Ohio were the center of the petroleum industry in the United States.

In addition to cracking, there is another form of forced refining which has added millions of barrels of gasoline to the annual output. This process is a treatment of petroleum's natural gas, which has in it a considerable proportion of gasoline, just as the atmosphere contains a considerable proportion of water. By putting the natural gas through a condensation process that precipitates the gasoline from it, refiners have added about another 10 per cent to the gasoline supply. In 1929, by a combination of the three gasoline extraction methods described above, the petroleum industry produced and sold about 18,000,000,000 gallons of gasoline, of which Texas Corporation produced and sold 6.7 per cent of the total sale. It may be added that Texas Corporation, refining 6.7 per cent of gasoline, produced only 4.4 per cent of crude, ranking sixth in refining and fifth in production. The former, to repeat, makes the money.

The possibility of cracking processes becoming obsolete has already been mentioned. Indeed, the most interesting development in the refining field today (and the development most important from the standpoint of gasoline's future) is not cracking but hydrogenation. As the name

implies, hydrogenation involves the addition of hydrogen to carbon to make a synthetic hydrocarbon or, in other words, a synthetic gasoline. There are at present two main hydrogenation processes, in one of which hydrogen is added to coal and in the other to crude oil. Enthusiasts of this second process maintain that from hydrogenated crude there can be extracted an amount of gasoline equal to the amount of crude—i.e., a 100 per cent ratio. On the other hand, it must be remembered that chemical elements ordinarily do not combine with each other simply by being put side by side. It is easy, for instance, to separate table salt into its chlorine and sodium

constituents, but chlorine and sodium could be stirred together endlessly with no salt resulting. Particularly interested in hydrogenation is Standard Oil of New Jersey, which controls (outside of Germany) the processes for the hydrogenation of coal developed by the I. G. Farbenindustrie, the so-called German Dye Trust. At present no hydrogenation process has reached a state of commercial importance, but many petroleum authorities believe that hydrogenation is bound to come out of the laboratory and into the refinery, where it may make the question of the ultimate reserves of petroleum a matter of purely academic interest.



A LUBRICATING AGITATOR—LUBRICANTS FROM PETROLEUM

Shipping

EMPTY hulls from most of the ports of the world, riding high on the muddy waters of the bayou, nuzzle to their berths at the piers of a squat, wind-swept island in the channel that leads from Port Arthur to the Gulf of Mexico. Along the scant mile of water front Lascar and Levantine, Briton and Dane hail each other from deck and pier. *Cymbeline* from Liverpool, settling lower in the water under a cargo of kerosene ultimately to be hawked from door to door in China from cans labeled *Yin Foo* (Good Fortune) *Hung Sing* (Red Star); *Clavarak* of New Orleans, clearing in a few days for Atlantic Coast ports; *Scottish Heather*; *Volunteer*; *Occidental*; side by side . . .

The Texas Corporation island, Manhattan-shaped, Manhattan-busy, is the terminal of a tangle of pipe lines that spout the Texas products refined on the mainland and of railway spurs that lead from the refinery enclosure. Switch engines chuff through the yards; oil drums roll heavily along the docks. From the box works comes the pungent odor of Louisiana-grown tupelo wood and the machine gun racket of box-making machines . . .

No one smokes on the island. Eight hundred people working steadily, unexcitedly, on the island, absently sniffing for the scent of smoke, live always in apprehension of fire. Old-timers recall the occasions years ago when the island *did* burn. Boat funnels must be screened. From the harbor is incessantly skimmed the surface film of inflammable oil. Hungry goats rove the island munching paper. . .

Oil in silvery tanks, row upon row. Oil in five-gallon cans clacking along conveyors. Oil spouting from pipe nozzles. Oil spurting from hose in cadence with the incessant throb-throb-throb of the pumps . . .

One of the largest oil canneries that man has yet built.

At the end of the plant pure tin from Singapore and Penang is alloyed with lead and then fed to a machine which makes 68,000 five-gallon cans each day. Automatic conveyors slide the empty cans under outlets of the Drake filler-and-capper, the invention of Superintendent Rollin Lawrence Drake. Then, filled, they go on to meet the boxes.

The boxes, two thousand of them an hour, are fashioned entirely by machine. The perfect ones, automatically cut, automatically nailed, slide down to meet the filled cans at the stage door of the filler-and-capper. The imperfect ones are rejected by the machine. Duplicates of many of these machines, developed by Texaco mechanical geni, are licensed at good profit to rival oil companies.

From the filler-and-capper, two by two in twin cases, the five-gallon containers of kerosene and other Texaco "case goods" travel hundreds of feet to the heads of spiral gravity conveyors. Their final slide is downward into ships' holds.

Large metal drums of *lubricants*, filled at the refinery and delivered to the island in gondola



OIL GOES OUT TO SEA IN TANKERS

cars, are rolled down the piers by swart, good-natured Cajans. Each drum has two high ridges encircling it. These serve as wheels to make rolling easier. The Cajans make it easier yet. They move slowly. But steadily. These large drums are picked up in rope tackles and are lowered by derricks into gaping holds.

From these wharves the tankers and freighters go to nearly every nation of the world, excepting, of course, Russia, which is not open to United States oils. Some business is even done in

India, the domain of Standard of New York, and of Royal Dutch whose Borneo and Sumatra oil fields are nearby.

On the export building a plaque is clear: "East of Suez, or up the Amazon, in the mysterious Orient, along the Gold Coast of Africa, or in the capitals of the Old World, and again in the jungles or across the deserts, wherever the need of man calls for oil to light his dwelling or operate his machine, the Texaco trade-mark is seen and respected . . ."

Piping: Here Oil Meets Public Utility

Petroleum flows through 100,000 miles of pipe but Natural Gas is the greatest contemporary pipe development.

SIMPLE enough is the statement that after petroleum is taken from the well it is then sent through a pipe to the refinery. Less simple is the actual process, however, for the refinery may be 300 or 500 or 1,000 miles from the well. The Texas Corporation, for example, has some 6,700 wells scattered through Texas, Oklahoma, Louisiana, Arkansas, New Mexico, Kansas, and California. It also has 17 refineries. To bring the crude oil from the 6,700 wells to the 17 refineries, it operates more than 6,000 miles of pipe line, most of which converge at Lockport, Illinois, Los Angeles, and especially Port Arthur, site of the fourth largest refinery in the United States. Not only has every large oil company its own pipe line systems, but there are also pipe line companies interested neither in production nor refining but solely in transportation. Pipe line companies are sometimes very large and extremely profitable—Prairie Pipe Line, for instance, showing (1929) a net of \$22,800,453. The industry as a whole operates approximately 100,000 miles of pipe lines as compared, for example, to the 26,000 miles of track operated by the Pennsylvania Railroad.

The analogy between pipe lines and railroads is inevitable, since both are agencies of transportation, both are common carriers (the pipe line must carry any man's oil just as the railroad must carry any man's freight), and both are built up, bit by bit, over tremendous stretches of country. A unit section of pipe line is 40 feet long and usually 8 inches in diameter, although also used are 10-inch, 12-inch, and 16-inch pipe. The sections are solidly welded together to form, in effect, one continuous section of tubing. Just as the railroader joins rail to rail until his lines of steel have crossed a continent, so the pipe line man adds pipe section to pipe section across 100 or 1,000 miles of mountain and valley and forest and stream. But the pipe line man has what the railroader can only dream of—a 100 per cent freight-carrying system with all merchandise making a through run on a main line.

As the railroad has its train dispatcher, so the oilman has his oil dispatcher. From its Houston office building the Texas Corporation controls the handling of more different grades of crude oil than any other company. The dispatcher knows the slope of each pipe line section, the flowing quality of the various types of crude, and the speed (maintained by pumps at twenty or thirty mile intervals) at which the oil is traveling. Now he sends Louisiana crude to Shreveport and West Dallas; now heavy-gravity Oklahoma crude to West Tulsa or Houston; now heavy-asphalt base crude to Port Neches; but always the great bulk of crude to Port Arthur, grand terminal of the Texas system.

The dispatcher is always in communication with every mile of pipe line. He knows where pipes have corroded or frozen, where pressure has fallen from faulty pumps, where a leaking pipe is sending barrel after barrel of valuable petroleum soaking into the ground. He can almost literally put his finger on that barrel of petroleum which yesterday came out of a well in Louisiana and will arrive at Port Arthur today.

The pipe line is by far the cheapest form of overland oil transportation; but the tanker is also a factor in crude transportation. In the early days of the petroleum industry, when New York, Ohio, and particularly Pennsylvania were the major producing states, many great refineries were built along the Atlantic seaboard. Today most of these refineries (as at Portland, Bayonne, and Baltimore) receive the bulk of their oil by tanker delivery from the Gulf. Indeed, the eastern refiners have on their hands many pipe lines which, running from abandoned Pennsylvania and Ohio fields, are no longer of any value as west-to-east carriers. So Standard of New Jersey, ever resourceful, has decided to use a 371-mile line running between the seaboard and western Pennsylvania as a westward carrier and to send through it not crude oil, but gasoline. Standard believes that gasoline can be pumped through this pipe line and distributed through western Pennsylvania more cheaply than by railroad tank-cars. Here is indeed a startling innovation, since pipe lines hitherto have always carried crude but never gasoline. At present, however, it is regarded more as a means of utilizing abandoned pipe lines than as a competitor to tank-car and rail.

Possibly the most significant and certainly the most rapidly expanding aspect of piping is concerned not with liquid petroleum but with natural gas. Natural gas, like petroleum, is a hydrocarbon, most of it occurring in the form of methane. But gas and petroleum are not always found together. In Pennsylvania and in Ohio there are now in operation natural gas wells from some of which petroleum was at one time extracted while others yielded no oil at any period. But the bulk of natural gas does come out of oil wells and is produced by the producers of petroleum. The rich Kettleman Hills field in California, despite its great petroleum deposits, is regarded by many geologists as primarily a reservoir of natural gas.

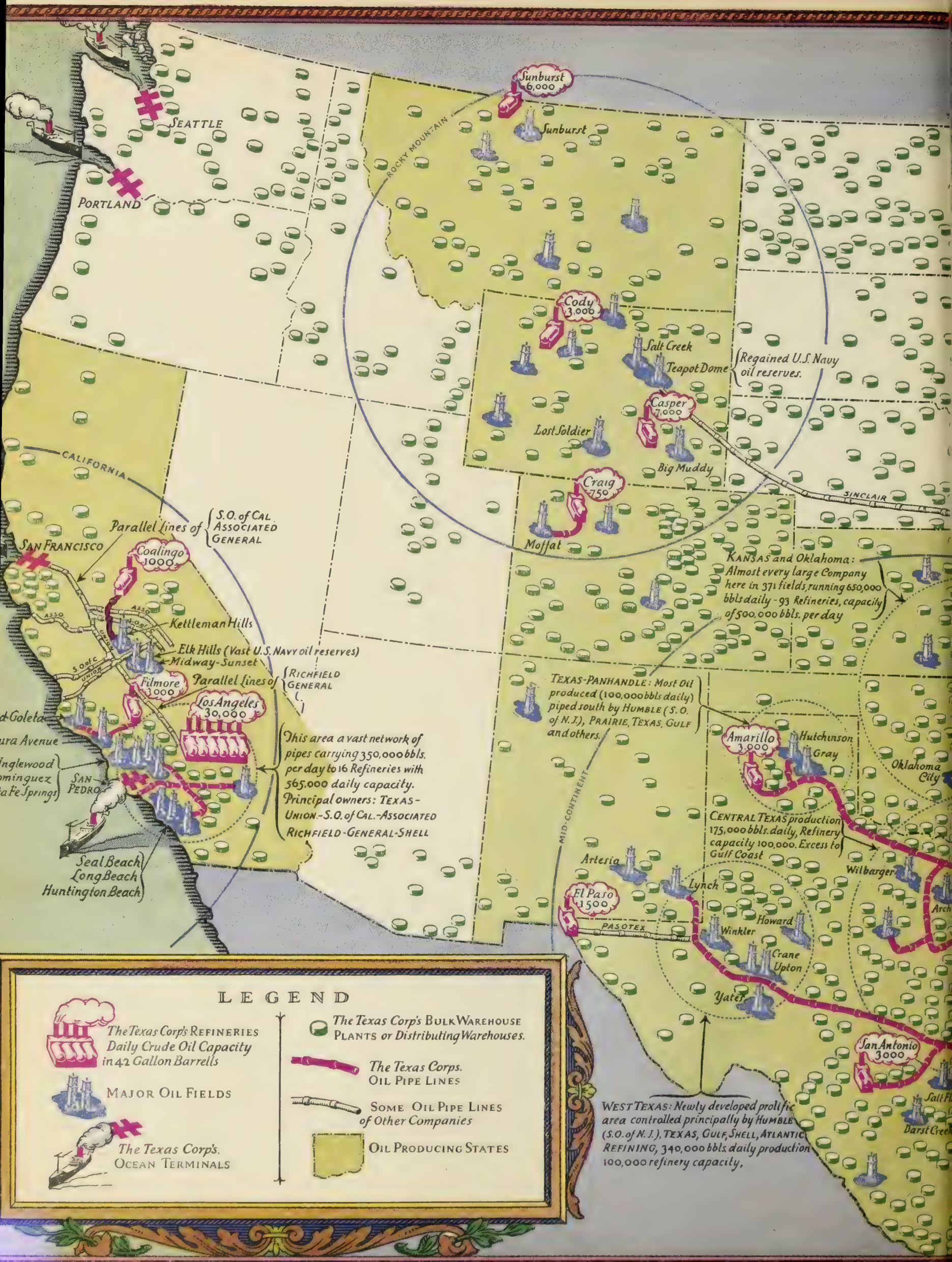
In petroleum's early period, natural gas was wasted in incalculable amounts. Often it was set afire, and the mouth of the well permitted to remain a blazing torch until the gas had all burned off. Even today a well occasionally catches fire and makes one of the most difficult of all blazes to extinguish. Indeed, it is often necessary to dig

into the earth around the blazing well and dynamite the flame, blowing it out on the same principle that one blows out a burning match by scattering the flaming mass and separating it from the parent fuel that feeds its fire. But the gas well fire is not blown out as much as it is blown apart into many little fires, which a crew of asbestos-clad workmen rush upon and smother with steel plates.

A great deal of the natural gas produced in the oil fields is used by the oilman himself to drive his drills and his pumps and otherwise make its energy immediately useful. Another large percentage is burned down to make carbon black, but this is rather a wasteful procedure as it requires a tremendous quantity of gas to give a small carbon black residue. Between fuel in the oil fields and reduction to carbon black, about half the natural gas produced is used in the oil fields themselves.

The other half, however, does go through pipe lines and it is this half (which may yet be very much more than half) which currently occupies the industry's attention. There are some 57,000 miles of natural gas pipe line (in addition to the 100,000 miles of petroleum pipe line), most of which are owned by the producing companies and all of which run, not to any refinery, but to the various cities where they supply heat and fuel. Temperatures ranging from 2800 degrees to 3800 degrees are obtainable with natural gas, which is widely used in all heating, melting, and forging processes and finds perhaps its greatest field in the ceramic industry (ceramic here meaning brickmaking as well as clay in its more artistic shapes). As a fuel it has purity, availability, controllability, and a very low cost per heat unit obtained.

The uses of natural gas bring it out of the petroleum industry and into the public utility field. Thus while the largest producer of natural gas is the Standard Oil Company of New Jersey, the next largest is the Columbia Gas & Electric Corp., and the third largest is Henry Doherty's Cities Service Company, which is, of course, a combination oil-and-utility organization. Possibly a half dozen years ago natural gas was considered a sick industry. Today it is thriving and prosperous. One of the chief reasons for Texas Corporation's \$100,000,000 bond issue was the development of the company's natural gas resources. The improvement in the natural gas industry resulted from the petroleum industry's realization of the fact that natural gas, while certainly a by-product, is by no means a waste-product, and its consequent willingness to lay the necessary pipe line systems to carry the natural gas from the oil fields to the towns and cities.



THE TEXAS CORPORATION

and its relationship to the industry



Eating and Drinking the Imperial Dinner

Bordeaux was twice crowned—Château Lafite tested taste.

THERE was much and there is still a little wine so precious that it must be opened with a pair of red-hot tongs. Some of the last of it—a Château Lafite 1865—was offered by the Imperial Government of His Majesty King George at the State banquet which preceded the opening of the London Naval Conference. We shall presently see how various members of the American Delegation reacted to supreme temptation. By the noblest standards of good food and great wine this was the Dinner of the Year, possibly the Dinner of the Century, certainly a proper Imperial Dinner.

Sheer taste was allowed for once to vanquish politics. There was no patriotic procession of wines from the British Dominions although their representatives sat as plenipo-

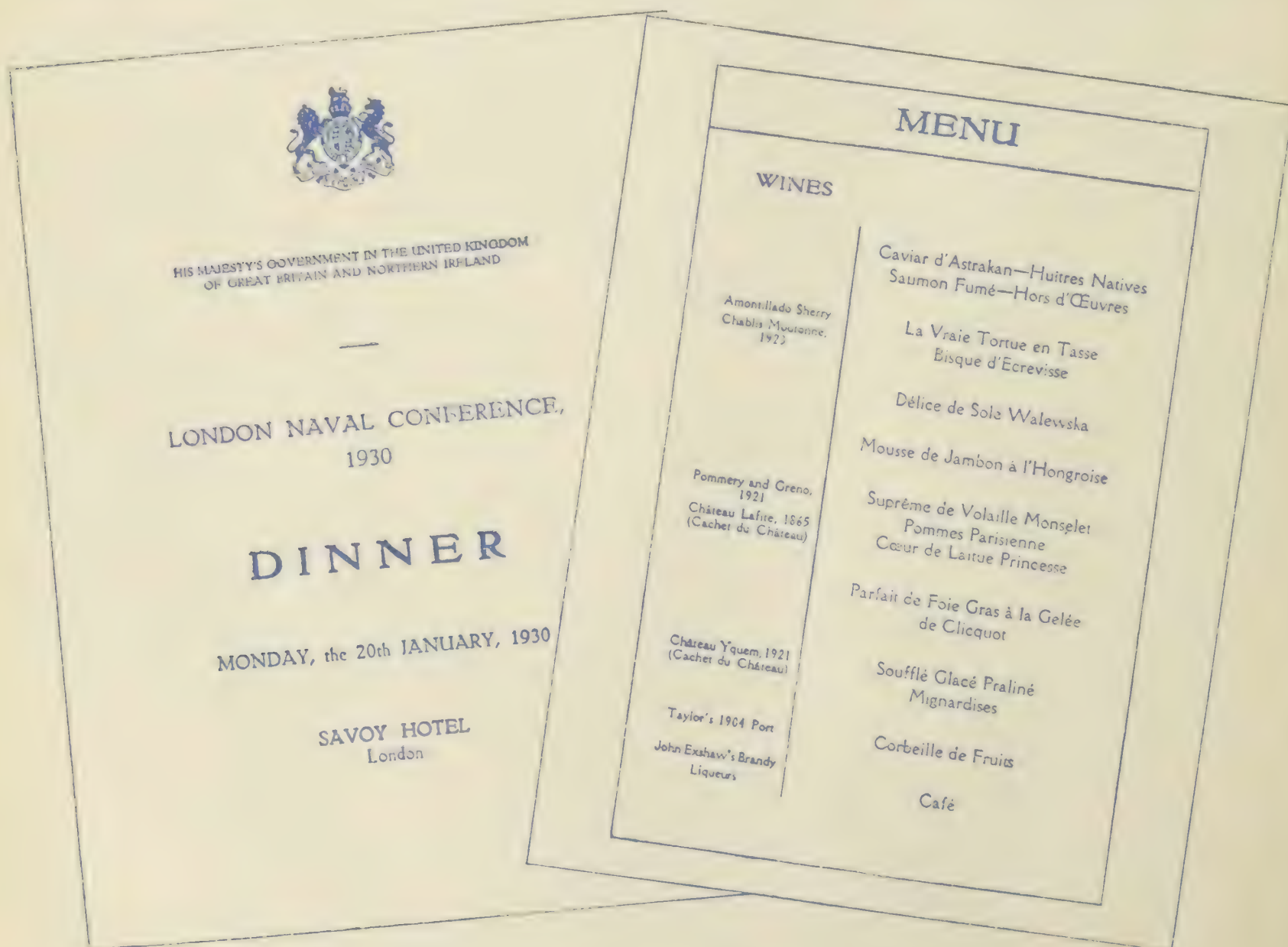
tentiaries at the board. That frothy abomination, Asti Spumante, was not poured, although its native Italy was represented by Il Duce's closest friend, Signor Dino Grandi. Even the chief Japanese delegate, Mr. Wakatsuki (pronounced, oddly enough, "Wakatsky") had to go without the sake he likes so well—so well that twenty jolly little kegs of it traveled with him from Tokyo to London across dry America.

Especially in choosing wine is patriotism the last refuge of a scoundrel. The Labor Government of Great Britain faced and bowed to the fact that in the two main classes of wine—fortified and unfortified—three nations are supreme: Spain and Portugal (represented at the Naval Conference only by their wines) and, of course, France.

Of even greater interest to the connoisseur was the preference definitely shown between the two regions which are generally conceded to produce the best French wine, that is to say the world's best: Bordeaux and Burgundy. At the Imperial Dinner no Burgundy was poured, but Bordeaux was twice crowned, first in royal purple and at last in celestial gold.

The man behind the wine

The decision to exalt Bordeaux instead of Burgundy and other decisions which caused a palpitation, not to say furor, in the sedate London wine trade were made by Mr. George Reeves-Smith. He is certainly the highest professional authority on food and wine in England,



and the greatest French connoisseurs—the most clannish and exclusive experts in the world—rank him with themselves.

Many pleasant compliments might be exchanged in comparing Mr. Reeves-Smith and a great wine. He has age. Indeed he is almost a full generation older than the venerable Château Lafite 1865 which he chose for the delegates. But the astonishing quality of a really great wine is its power to mellow and improve with age, to continue fresh and vital long after its rivals have, in the vintner's phrase, "gone off." From his office facing the Thames Embankment, constantly assailed by the rattle of trolley cars, Mr. Reeves-Smith directs, not passively, but with an activity which is often the despair of his subordinates, three huge hotels: the Savoy (his favorite of the three), the Berkeley (where he lives), and Claridge's.

This last, an historic hostel, one of the bulwarks which British aristocracy expects to find always ready to be leaned upon, Mr. Reeves-Smith has entirely transformed in the most striking and advanced *art moderne*. He has managed to do it without losing the patronage of a scandalized and rebellious but fascinated peerage. Even before *l'art moderne* existed, Mr. Reeves-Smith had sensed this trend, which, he confidently predicts, will sweep all other styles away. A small secret may now be told. In 1913 he devised, quite unofficially and without pay, the architectural means which made it possible to quickly cover the ugly, brick façade of Buckingham Palace with its present handsome marble front—the job taking months by the Reeves-Smith method, whereas Royalty had almost become resigned to its taking years. The method, worked out in the first place when it was a question of refacing the Savoy, is simplicity itself, but no British builder had thought of using it on a large scale before. Procedure: rent several vacant lots, assemble on them everything which will be needed for the construction job, down to the very doormat, then with no possibility of delay from lack of materials, and not forgetting to pay wages high enough to preclude strikes, Your Majesty may rest assured that Buckingham Palace will have a new front in the shortest possible time.

Speed, when speed is rational and effective, is the compelling philosophy of this Englishman, who may seem to contradict his race. His first trip to America was made last spring, when he reveled with unashamed delight in the speed welter of New York.

Indeed, Mr. Reeves-Smith was intrigued by America to the extent of leaving off the correct tail coat and striped trousers in which he goes every morning to his London office, wearing instead, for the duration of his visit, a sack coat with pants to match, a costume as delightfully queer to him as fancy dress. When he got home, he decided that the sort of pneumatic drill used to dig up American streets was the very thing wherewith to destroy in a jiffy certain parts of the Savoy, the sooner to install things more modern. Though he has carefully never said so, English friends of Mr. Reeves-Smith have easily divined that he privately considers the Ritz-Carlton hotels of America appallingly old-fashioned in furnishings and methods.

Such today is the man who wrote the Menu

of the Year. He spent his youth in the most English of French cities, Bordeaux, in zealous apprenticeship to the wine kings of France, the family of Calvet, premier shippers of both Bordeaux and Burgundy. (Indeed their heaviest interests are in the latter district.) Thus Mr. Reeves-Smith can scarcely be accused of bending the way his twig was inclined when he chose to exalt Bordeaux at the Imperial Dinner. As a business man whose fortune has been built on the taste buds of his tongue (he still personally samples and buys all of the 298 kinds of wine kept in stock by his hotels), his taste is catholic and without the whims of the amateur. He plumes himself on having been first of the great buyers to decide that the 1921 white wines of Germany, the hocks, would surpass all other years in the memory of man, and he bought in huge quantities and with huge profits accordingly.

Writing the Menu of the Year

So many banquet menus contain pretentious or would-be-witty names improvised for the occasion that this one is notable first for its quiet authenticity. The epicure will recognize every dish by its proper name, as the chemist knows exactly what is meant by trinitrotoluene, vulgarly called T.N.T. Similarly, *Délice de Sole Walewska* (see menu) has been for a generation at least the convenient abbreviation for a perfectly definite sole formula:

Poached fillets arranged on lobster collops with slices of truffle laid upon the fillets, the whole masked with Sauce Mornay and glazed in the oven.

To write down a fish as *Suprême de Sole à la Conférence Navale*, when it is actually a sole in the formula *Walewska* is something which no honest or witty man would do. In this respect the best English tradition is probably sounder

than the French. Though he may write the rest of the menu sensibly enough, your Frenchman is prone to give some impromptu and ridiculous name to the dessert, such as *Bombe Stimson*.

On the Menu of the Year, then, the viands are authentic prose, but the wines are poems, nay, rhapsodies. By omitting cocktails entirely, Mr. Reeves-Smith reminded the delegates as discreetly as possible of a tenet accepted as infallible dogma by the connoisseurs of two hemispheres, namely, that alcohol in a semi-raw condition blunts the keen, discriminatory edge of taste almost as fatally as does a cigarette.

In placing Spanish sherry next to the "Real Turtle," so dear to every cultivated Englishman, the menu is again on unassailable ground. For the taking of a fortified wine—one to whose natural alcohol a little spirit has been added—with soup warms and awakens the stomach with a gentle stimulation as agreeable as the "kick" of the cocktail is crude. *Amontillado*, besides being among the lightest, driest, and most refined of sherries, is probably the only one known (thanks to Edgar Allan Poe and his *Cask of Amontillado*) to every member of the American Delegation.

With the Chablis the menu enters debatable ground. Those who know Mr. Reeves-Smith may surmise that he would personally have preferred to take a hock with the fish. In thus departing from British and French tradition, he would have had on his side the greatest and most venerable amateur of the vine, Professor George Saintsbury, who is frequently distressed because he cannot explain satisfactorily, even to himself, why he does not *quite* prefer Chablis with fish. At a State dinner, especially with French connoisseurs present (and André Tardieu will just barely pass for one), the serving of a German hock, however supreme, would have been a thought too bold.

The bold, yet not too bold, feature of the menu—an innovation of real note—was the offering of a choice between two such wines as *Pommery and Greno 1921* and *Château Lafite 1865*. A Frenchman would not have dared to do this, fearing the guests would take it as a studied insult to their taste. An American, Italian, or Japanese might have done it accidentally. But the common sense traditional in Britons was required to see that it was unquestionably the thing to do.

Here were nearly five hundred guests. They must be offered the best to which their rank entitled them, but only a few could be expected to appreciate the finest. Without question the women and the Japanese without distinction of sex would choose the champagne. No one could say that the brand and vintage offered were not the best. But to a man who knows anything about wine there is no choice between any champagne and a Lafite of a good year, much less the supreme Lafite 1865, probably the greatest red wine in the world, and of which but a pitifully few bottles are left. It was in order to save as many of these as he could from being cast before such delegates as would not appreciate them that Mr. Reeves-Smith wrote into the Menu of the Year ostensibly a choice, but actually a test, of the individual

[Continued on page 128]



Blank-Stoller

MR. REEVES-SMITH DIRECTS THE SAVOY, THE BERKELEY, AND CLARIDGE'S

A Panel of General Motors Executives

Having ambition where the ordinary man has discontent, their only common characteristic is energy. Not bigger wheels but faster.

ONE of the major tendencies in the discussion of industry is the personification of corporations. A corporation is a bodiless creature; it loves not, neither does it hate. It is deplorably lacking in what is popularly known as human interest, and it has hardly any typical feature except that its home is nearly always in Delaware. So, because corporations, as such, are dull, their activities are frequently discussed in terms of the individuals who direct them. Thus any company with which the house of J. P. Morgan & Co. has the slightest connection is popularly (and mistakenly) labeled a Morgan company. Thus the Aluminum Company of America is widely publicized as a portion of the estate of Andrew W. Mellon. Thus the rivalry between Ford Motor and General Motors is visualized as a battle between Mr. Ford and Mr. Sloan. And thus is the ancient pathetic fallacy applied to the modern industrial world.

But where the writer about a corporation usually too much personifies the institution, the corporation itself is equally likely to go too far in institutionalizing the personalities. Corporate executives, modest and disclaiming, maintain that they are of no great importance, that their company would carry on, and will carry on, without them. But surely it will not be the *same* company that continues; surely the banner itself fluctuates with the hands that carry it. General Motors under the substantial Mr. Sloan is not the same organization as General Motors under Mr. Durant. The Cadillac of Mr. Fisher is not the Cadillac of Mr. Leland. A corporation is a bodiless entity, but it is composed of many bodies; and whenever an office boy is discharged or a file clerk is hired, the character of the whole corporate structure experiences an almost imperceptible but none the less real variation. So, whatever may be the error of discussing a corporation as if it were a person, and particularly as if that person were the president operating in a sort of vacuum, it is equally wrong to discuss a corporation as if it consisted of nothing but a gross income, a net income, and a statement to stockholders. This last conception this article completely omits.

In the following pages an attempt has been made to give a cross section of General Motors by presenting brief sketches of some of the men whom General Motors has chosen as its leaders. Obviously no directory of General Motors, with its more than two hundred thousand employees, is possible. Neither is there an attempt to segregate only the field marshals or all the field marshals in the General Motors army. The men discussed are big men in General Motors, are not necessarily its biggest men. For comparisons of magnitude are always unfortunate, and the object here has been to indicate the typical rather than the topmost; the characteristic as well as the controlling.

These pages do not discuss, for instance, the most distinguished name in General Motors: du Pont. It also happens that the head of its largest division, Chevrolet's Mr. Knudsen, is omitted from the panel. He it was who, landing in America

from Copenhagen, heard a deck hand remark, "Keep moving there, you so-and-so," and has kept moving ever since. The panel does not include Buick's Mr. Strong, who, once a bandsman, still fills his house with the noise of drums, cymbals, and triangles. Nor does it include the efficient Mr. Reuter, president of Oldsmobile, but now in Germany managing the newly-acquired Opel works; or the tight-lipped, poker-faced Donaldson Brown, who succeeded Mr. Raskob in the chairmanship of the finance committee; or blue-eyed H. H. Curtice, who heads A C Spark Plugs (named for Albert Champion, French bicycle racer); or Frigidaire's Elmer G. Biechler, whose first job was digging holes for telephone posts. They do comprise, however, most of the types of men around whom General Motors is built. There is the executive; the salesman; the inventor; the operating man; the wise financial man. They constitute a section, a sample, of the men who make General Motors; look at them through a magnifying glass and General Motors will be presented to your view.

They are men of various kinds. Not all belong to "Mr. Raskob's Eighty Millionaires" (the group of major executives participating in General Motors stock-sharing trust) but most of them are millionaires and many run to million dollar mansions and half-million dollar yachts. The yacht, incidentally, appears to have become the current symbol of riches, with an island to go with it as the occasional crowning touch. Some are college men and some are self-made; some wear spats and some prefer shirt sleeves—they have hardly a common characteristic except energy.

Someone has remarked that the gods of the ancients were "men writ large." The deities of modern industry are men geared high. They do not necessarily possess outstanding qualities of abstract mentality. But they have an ambition where the ordinary man has a discontent; they dominate their big jobs where the ordinary man is dominated by a small job; they have confidence that they are moving up where the ordinary man has an apprehension that he may be moving out. It is not so much that they are bigger wheels as it is that they rotate so much more rapidly. No matter how much money they may make or how powerful they may become, most of them retain a fundamental simplicity. The Fisher brothers, for instance, are not most characteristic when their yachts are scattering the spray or their old masters are adorning their galleries. They are most characteristic when each of them, on his particular night of the week, is paying a visit to his aged mother. And so it is with most of the tycoons, particularly of the self-made sort. They are so rich that they do not know what to do with their money. They are so powerful that the livelihood of thousands of workmen may depend upon them. But they lack imperial instincts and are, happily, without delusions of grandeur. Thus they are never so pleased as when described as just poor boys who have "got along." Which is like explaining the lion in terms of the cat.



U. & U.

ALFRED PRITCHARD SLOAN JR. is president of General Motors, which has made more money in one year than any other concern in history and, profit-wise, has left such giants as U. S. Steel and Pennsylvania Railroad far behind. He has a long, thin, tired face and a long, thin, nervous body. Mr. Sloan lacks entirely the arrogance of office. His is the late-maturing personality, developing more through its responsibilities than through its ego. A subordinate who had made a rather radical suggestion concerning his department said, "I suppose you will bawl me out for this." With an astonished expression Mr. Sloan replied with great sincerity, "Have you ever known me to bawl anybody out?"

Unquestioned is Mr. Sloan's leadership of General Motors, but the company is not a one-man show. General Motors is not greased to the Napoleonic individualism of Fox Film or Ford Motor. It is indeed organized specifically against the man-on-horseback idea, and the various divisions are filled with high-powered executives

who would not take kindly to being ridden. In General Motors there is a tendency (perhaps more theory than fact) to operate by "suggestions" rather than orders. The danger of such an organization is a lack of unified progress. The guard against this danger is Mr. Sloan, adjuster of difficulties, reconciler of temperaments, sponsor of progress. To General Motors his is the admirable contribution of stifling the tempests while they are still in the teapots.

Some there are who detect in Mr. Sloan, despite his tremendously successful career, a certain frustration. He did write a portion of a book on business—a book which (surely not for lack of a public) has never appeared. Despite an occasional checked suit and flopping handkerchief, he is by no means the "playboy executive." He does not golf. He seldom uses his yacht. He collects neither pictures nor philanthropies. He works hard all day and every day (although not, as Mr. Durant was said to do, day and night also). Yet he has not turned into a man with a narrow, limited, one-track mind. This may have some relation to the fact that ever since his Hyatt Roller days he has been in a mechanical business and has *never* liked to tinker. He is forever patient, and his courtesy to an office boy is the same as his courtesy to his friend of old standing, Henry Ford. Mr. Sloan has neither escaped from his job nor succumbed to it. He is merely working at it.

And, as his other executives will tell you, he "gets a great kick out of it." He has an infinite capacity for removing trouble; a tireless zeal to inspire zeal. Exercising an authority without a coercion, placing a cool, calm hand on many a fevered brow, Mr. Sloan has kept the most profitable industrial organization in the world functioning with smooth efficiency. To Mr. Pierre du Pont the credit for putting General Motors upon an even keel, to Mr. Sloan credit for greatly accelerated progress with the ship still balanced and secure. Certainly Mr. Sloan's has been an accomplishment which would be eminently satisfactory to almost any man other than, perhaps, himself.



RICHARD H. GRANT is General Motors salesman extraordinary. Once he sold National Cash Registers under the guidance of John H. Patterson, one of the master salesmen of all time. He sold National Cash Registers in St. Louis, Philadelphia, and Atlanta, then, working from the central office in Dayton, introduced the elaborate cash register system now used in department stores throughout the country. In 1913, he was National Cash Register's general sales manager. Charles Franklin Kettering, the Edison of General Motors, was also at one time a National Cash Register employee. Mr. Grant then sold Delco-Light farm installations, then Frigidaires, then Chevrolets. Now he is in charge of General Motors sales, service, and advertising.

The essential of the good salesman is a devotion to selling, a single-minded concentration on the making of many sales. Such words as "high pressure," "contact," and especially "service" are no more trite to the salesman than prayers are to a clergyman. They are a part of his religion. And they are a part of Mr. Grant's religion. Mr. Grant can harangue a group of salesmen with the oratorical fervor, the verbal imagery, and the high seriousness of a William Jennings Bryan. In addition to addressing sales meetings, he used to make phonograph records of sales talks for all salesmen to play and heed. But instead of talking about a double standard of coinage or the literal interpretation of the Bible, Mr. Grant can talk about a mechanical refrigerator or an automotive achievement. From a logical standpoint, the Chevrolet is probably a good deal more intelligent Cause than bimetallism, but it takes a salesman to throb to it.

And Mr. Grant is the complete salesman. Large, serious eyes back of large, serious spectacles, a small but wiry body with a tremendous and unflagging energy, an unswerving conviction of the superiority of General Motors' products—plot the ideal salesman and Mr. Grant will be the resultant graph. At college (Harvard) he was disappointed in not quite making the football team. After college, the poetical portion of his nature found expression in some eighteen months' apprenticeship in a bookstore. Then, after a brief intermediate period with the New England Telephone Company, came Dayton and cash registers and the powerful Mr. Patterson to shape Mr. Grant in the way he was to go.

Mr. Grant has not much more private life than, for instance, a bishop. He did take an active part in War work in Dayton, and he does look after a 274-acre farm near Dayton, a farm on which he raises pure-bred live stock. But he spends most of his time in sales and visions of sales. He once told a pipe-smoking subordinate that the pipe, too frequently indulged in, would cost General Motors five thousand dollars yearly in lost sales energy. Last fall, after the market crash and the general feeling that auto sales for 1930 would be considerably under auto sales for 1929, Mr. Grant had to discharge some of his men. Said one dispensed-with individual, after the dispensation: "Mr. Grant made me feel sorrier for him than I felt for myself."

Mr. Grant's recent promotion from head of Chevrolet sales to head of General Motors sales is an added instance of General Motors coördination. There is wisdom in the plan: the star salesman now works not for any division of General Motors, but for General Motors itself.



JAMES LYNAH, of General Motors general purchasing committee, is a great purchasing agent who does not do any purchasing. The committee system under which General Motors functions is so theological in nicety of distinctions that even men who have been with the company for many years have difficulty in defining it. Essentially it represents an attempt to keep General Motors' seventy-odd divisions functioning freely as individual units but efficiently as parts of the entire institution.

The purchasing committee, for example, is made up of purchasing agents from the various divisions plus an executive secretary, Mr. Lynah, representing headquarters. The committee confers on the standardization and correlation of purchases, on waste, duplication, etc., etc. But, conference ended, the divisional members go back to their divisions and do their individual buying for themselves. Some years ago, General

Motors tried working with a group of headquarters experts advising and directing divisional effort. Thereupon the more potent divisions decided that no outsider could tell them what to do. So the committee system came into existence.

Mr. Lynah himself is a gentleman with a stern look and a Southern accent, the look dominating his office hours and the accent getting the upper hand in his leisure moments. Living in hospitable bachelor quarters, he is genuinely popular. He has always been extremely fond of the theatre and indirectly has contributed one of its stars. For, as captain of Cornell's 1904 football team, he sent into action Player Louis Wolheim, and out of a lively scrimmage emerged Mr. Wolheim with the battle-scarred countenance later so famous in *What Price Glory* and in the *Hairy Ape*.



GORDON LEFEBVRE is hard. At forty, he is vice president in charge of operations at Oakland-Pontiac. At thirty-five, he was general manager of General Motors of Canada. He works with his sleeves rolled up and a bashed hat on the side of his head. He smokes, swears, spits, chews, and the men like him. He hates golf. He hates novels. He wants to be out in the factory seeing why the wheels do not go round more rapidly.

Mr. Lefebvre has often been a student but never a graduate. After having been in and out of several private schools, he went to West Point. There he and some other high-spirited classmates were involved in a hazing investigation and expelled. Afterwards a special act of Congress reinstated them, but Mr. Lefebvre did not return. He shifted to V. P. I., where again he received no diploma.

Three days after his arrival at Oakland-Pontiac, he ordered that all precision measurements be made twice as precise. Then he got the men better tools with which to work. He discovered that supplies were lying around for four weeks.

Four days, said Mr. Lefebvre. He started a war on waste, with prizes and display boards and speeches and sectors. The top prize was one hundred and fifty dollars, and one of the waste-removing suggestions was worth thirty-three thousand dollars.

Besides being hard, Mr. Lefebvre is handsome. Tall, dark, and handsome. He likes to get into evening clothes (all military men are fond of uniforms) and dance. He has a semi-pompadour and sparkling eyes and a mouth like a saber slash and looks at least a dozen years younger than his age. He is married, has two children, lives in Birmingham, smart Detroit suburb. A Southerner, he imports his ham from the South. Watch him on the dance floor, and you would guess that he came from Richmond and from West Point. You feel that a war would be his best background, but he makes a factory do almost as well. He is a congenital Major of Infantry who has become a Captain of Industry.



LYNN McNAUGHTON, Cadillac's vice president in charge of sales, who has been a Cadillac man since 1905, came to the Cadillac organization in pretty much the *mere boy* period of development. Unobtrusive in dress and in manner, Mr. McNaughton reduces to no particular formula except, perhaps, the unoriginal but inescapable maxims concerning persistence and industry and ability. He is, however, the father of automobile service, in the technical, not the oratorical, sense. One of his earliest Cadillac jobs was the management of the parts division, and so well did he handle it and so continuing has been his influence that last year, when a 1902 model Cadillac was sent wheezing from Detroit to New York, Cadillac service stations along the route were readily able to supply it with all necessary spare parts. Mr. McNaughton was one of the first salesmen of the self-starter, the Cadillac being the pioneer self-starting automobile. Still advanced, the Cadillac featured the 1930 auto

shows with a sixteen-cylinder car. He was also one of the earliest sponsors of color-in-the-automobile, the Cadillac at one time being offered in no less than five hundred color-and-upholstery combinations. Mr. McNaughton's son, John, goes to the Detroit University School; Mr. McNaughton goes to the Detroit Athletic Club; and the McNaughton family is at present awaiting the completion of a McNaughton residence in Grosse Pointe, smart Detroit suburb.

Mr. McNaughton is at the beginning of his second quarter century as Cadillac employee. He saw its prosperity under the Lelands, and their departure. He watched Mr. Durant's formation of General Motors, and heard Mr. Durant's farewells. Now, under the General Motors administration of Mr. Sloan, under the Cadillac administration of Mr. Lawrence Fisher, Mr. McNaughton carries cheerfully on.

AN INVENTOR is a person whom the public regards as a lunatic and the scientist regards as a mechanic. Sometimes he is so successful and his inventions are so far-reaching that he becomes, like Edison, a wizard in his lifetime or, like Fulton, a legend after his death. Sometimes his invention, like the Westinghouse air brake, is vital but not intimate, and the inventor reaps rather a vague and impersonal splendor. And sometimes, when the inventor is working for a large corporation, his public is virtually unaware of his existence, although in this case he may well be compensated in royalties for what he loses in glory. Thus it is doubtful whether more than one motorist out of a thousand has ever heard of Charles Franklin Kettering, or knows that it is through his ingenuity that motor cars need no longer be cranked and that bedroom windows can be opened and shut from the bed.

Except for the accident of wealth, Mr. Kettering fits so closely the conventional conception of an inventor that the resemblance becomes almost unconvincing. He was, of course, a poor boy. He was born on a farm near Loudonville, Ohio. His inventive genius and studious nature early manifested itself in the creation of a book rest attached to a plow handle, so that the boy Kettering could at once plow a field and read a book. He has had the uncommon man's usual difficulties with the conventional man of business. When he was an engineer for the National Cash Register Company, old Mr. Patterson used to fire him on sight, but the engineering department always hired him right back. During the War when he worked at Dayton on airplane engines and traveled frequently to Washington, he was continually boarding a train without either money or tickets. One of his maxims is that the average man hates changes and that the business man hates them more than anyone else. Though most of his inventions have been sufficiently concrete and certainly practical, he also entertains large, broad visions, such as reclaiming the tropics by building in them refrigerated houses.

Mr. Kettering's first great invention was the self-starter, in which the Lelands (who controlled Cadillac) were particularly interested inasmuch as one of their friends had been killed in a cranking accident. Mr. Kettering took the Lelands all over Detroit



Wide World

on a stopping-and-starting demonstration trip. The starter worked perfectly and the Lelands left convinced, but as soon as they had departed and Mr. Kettering attempted to start his car home, it refused to work. Shortly after this incident, Mr. Kettering ran a self-starting car into a ditch and broke a leg, and the only other car equipped with a self-starter caught fire and burned to the ground. Thereupon Mr. Kettering went to the Cadillac plant and, with his broken leg in a plaster cast, built another self-starter into another model car. The success of the Cadillac self-starter resulted in the universal adoption of the anti-cranking device and also in the prosperity of Mr. Kettering's Dayton Engineering Laboratories Company, products of which have since become famous under the trade name of Delco.

The part that Mr. Kettering played in the development of Duco is difficult to determine, inasmuch as Duco is officially the product of the du Pont laboratories. Mr. Kettering at least suggested the desirability of a quick-drying finish by his vigorous protest against the thirty-seven days customarily required for the drying of auto paint. When paint men said they might perhaps get the time down to thirty-four days, Mr. Kettering mentioned one hour as the ideal interval. The rest is lost in corporate obscurity.

If the development of Duco is surrounded by rumor, the development of Ethyl gasoline is surrounded by myth. One legend maintains that Mr. Kettering got the idea of a red, anti-knock gasoline from noticing that all plants growing near the ground were red underneath. A more

truthful version would be that Mr. Kettering, deciding that what motorists called knocking engines were really caused by knocking gasolines, started his laboratory working on a combination of gasoline and some anti-knock substance. Iodine removed the knock but damaged the engine. Xylene worked admirably but costs \$150 a gallon. Silenium has an odor which won for silenium gas the title of "Kettering's skunk." Finally, however, they tried the tetra-ethyl-lead from which Ethyl gas resulted. And, despite the plant myth, the redness of Ethyl has nothing to do with its performance.

Mr. Kettering is tall and gangling, a little bit reminiscent of Abraham Lincoln and a little bit of Ichabod Crane. He still prefaces most of his sentences with "Say" or "Listen." Like so many General Motors men he has a yacht, but the Kettering yacht is such a compendium of electrical apparatus that an unfortunate workman, laboring on its keel, was one day sharply shocked. In each stateroom of the yacht there is a dial telephone and a catalogue of numbered phonograph records. The occupant of the stateroom first dials number 11, then dials the number of whatever record he wishes to hear, and that record, via a radio loud-speaker, resounds through his cabin. In Mr. Kettering's home in Dayton there are eleven Frigidaires.

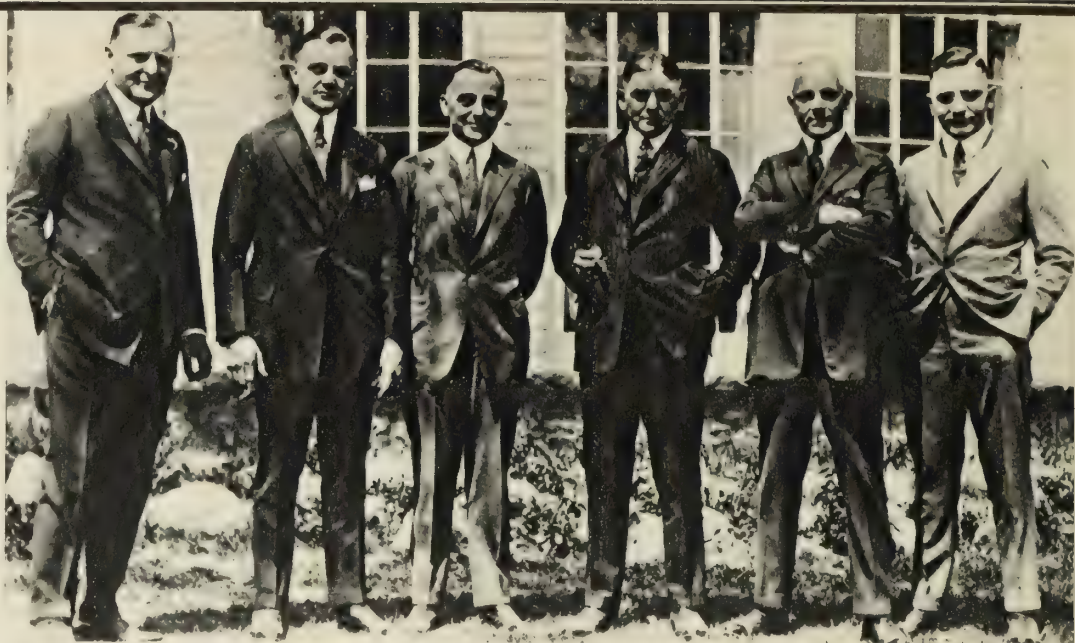
Mr. Kettering's private life has remained private. He has a wife, a son (at Cornell), and he lives, when in Detroit, at the Book-Cadillac. He is fond of young people, has contributed extensively to the Boy Scout movement. He likes miscellaneous knowledge of all kinds; was once discovered whiling away the hours of a train trip by going through an abstruse work on the origin of the alphabet. Vigorously honest, he opposes the cult of mystery in science, he is also one of the few really epic characters in the American scene. Perhaps no other man could come to a formal dinner in a duck suit and remain the perfectly unselfconscious center of attraction.

Mr. Kettering has small patience with little minds; regards no organization, not even General Motors, as a miracle of efficiency; is irritated by personal politics, by divisional rivalries, by all people who are weighted with the inertia of existing conditions. He feels that not mechanical difficulties but stagnant minds are the greatest obstacles to progress.

COMBINING ability, money, and solidarity, the Fisher Family is hardly dwarfed even by the General Motors Family of which it is a most important component. There are seven Fishers—Fred, the oldest (53); Howard, the youngest (29), and Charles, William, Lawrence, Alfred, and Edward in between. All except Howard had had some experience at their father's blacksmith forge and, again excepting Howard, all are of the self-made type. A strong family feeling animates all Fisher activities. The brothers lunch daily at their Fisher Building (with no outsiders present) and there determine all questions of policy. Each Fisher brother has his particular night in the week for calling on his mother so that, with seven sons for seven nights, Mrs. Fisher is never lonely. Fred is the acknowledged leader of the clan.

It was Fred and Charles who organized Fisher Body. In 1901, Fred was a draftsman for the C. R. Wilson Body Company of Detroit. The Wilson company at that time had rented a small portion of its floor space to one Henry Ford, who was then tinkering with a pre-Model T. One day a strolling photographer passed by, took a group picture of the Wilson employees and also of Mr. Ford. The picture now belongs to Fred Fisher (he bought it for \$500 from its owner, a body mechanic who remained a body mechanic). Later Mr. Ford tried to buy it from Mr. Fisher, but Mr. Fisher said, "Henry, you haven't got money enough." Fred Fisher was prodded into starting his own company when the Wilson people refused him a five dollar raise.

It was after the Fishers had sold Fisher



Keystone

Bodies to General Motors for some \$200,000,000 that they got into the market. At first they appeared to have been rather roped in, for a group of operators in Baldwin Locomotive thought that \$200,000,000 was too much money for any seven brothers to possess and unloaded large Baldwin holdings on the Fishers. Then the operators sold Baldwin short and waited for the Fishers to become discouraged and close out their holdings. But the Fishers had the money and the courage to be their own Baldwin pool; and, joining with Arthur Cutten, purchased so much Baldwin stock that now Mr. Cutten and two of the Fishers are Baldwin directors. The Fishers became one of the mainstays of the 1926-29 bull market and though they quite

literally lost a year's growth between October 23 to November 13, 1929, net increase in the ably managed fortune puts it at a currently estimated \$500,000,000.

All the Fishers live in Detroit, in several million dollars' worth of houses and at least a million dollars' worth of yachts. Their philanthropies are quiet but extensive, and Fred (who is a Catholic) has had a Y. M. C. A. named after him. More than merely operating men, and with wide interests (notably in oil, steel, and railroads) outside General Motors, the Fishers have become a great financial interest. Thus in General Motors today there is a du Pont interest, a Morgan interest, a Fisher interest.



ALBERT BRADLEY is a financial vice president with particular interest in General Motors aviation affiliates. Like many other General Motors executives, he is college trained. But where Mr. Grant looks back to football at Harvard and Mr. Lynah to football at Cornell, Mr. Bradley remembers a Phi Beta Kappa key and a B. S. at Dartmouth and a Ph.D. at Michigan. He is, therefore, a somewhat rare specimen—the scholar in industry. The executive, as a type, is successful through an abundance of experience and a superabundance of energy, sometimes with a technical education to speed him on his way. An unusually able mind (in the pure, unapplied, academic sense) is rare in industry. Of course it is just as rare in the arts and the professions, and there are fully as many stupid musicians and stupid doctors as there are stupid vice presidents, but the industrialist has not yet grasped this point and quite generally suffers from an inferiority complex, which, fortunately, he will ultimately outgrow. Mr. Bradley may be said to have succeeded largely through his ability to grasp the theory of economics and finance (in 1917 he resigned an economics professorship at Michigan to

enter the air service) and to apply that theory to the specific economic and financial problems of General Motors. And the trained mind as an industrial asset is well illustrated by Mr. Bradley, who, still in his thirties, is not only a General Motors vice president but also the chairman of Bendix Aviation's finance committee and a respected voice in General Motors financial counsels.

Mr. Bradley is stout, round-faced, chubby-cheeked, spectacled, with an habitually benign and almost beaming expression. In addition to golf, he is interested in bowling and prize fighting. He is extremely popular with his associates who, after enumerating his academic honors, will hastily add that he is really a very good fellow and "not at all a grind type." Mr. Bradley lives quietly on Fifth Avenue with his wife, his son, and his daughter. At a period in which it is conventional for the tycoon to read books and to hear operas, Mr. Bradley is in a position to read those books and to hear those operas for which he has a preference.



International

ALFRED H. SWAYNE is large, stout, and grey-haired, with somewhat the manner and appearance of the plain, blunt man—the proprietor not, perhaps, of a country store, but certainly of a country bank. In fact, however, he is metropolitan and cosmopolitan. Washington, D. C., St. Paul's, Yale, New York Law School, corporation and railroad counsel, broker, dollar-a-year man—such is Mr. Swayne's actual background. He lives in Manhattan with his sister, Eleanor. A brother, Noah H., is a Philadelphia coal man who has given negro spirituals on the concert stage. Mr. Swayne, Mr. Kettering, and Mr. Grant are the only three of the General Motors executives herein described listed in the Social Register—Mr. Swayne, New York; Messrs. Kettering and Grant, Dayton.

He is much more a finance man than an auto man. As chairman of General Motors Acceptance Corporation he supervises a yearly credit of about one billion dollars, a credit through which General Motors

handles much of its wholesale, retail, and foreign distribution. It was back in 1919 that General Motors inaugurated the installment selling of automobiles; in that year installment operations totaled \$20,880,988. There was a good deal of skepticism about installment sales in their early days but, as Mr. Swayne himself has remarked, "The American public is 99.81 per cent honest," and for the greater part of the past eleven years it has been nearly 100 per cent solvent.

Mr. Swayne also headed the institutional advertising committee and the department of publicity. It is these activities which, with the assistance of Batten, Barton, Durstine & Osborn, have sold the concept of the General Motors Family. There was a time, not many years ago, when General Motors was so little known as a unit that one large stockholder imagined that Pierce-Arrow was a General Motors product and another did not know that Cadillac belonged to the family. Distressing, also, was the fact that many a minor employee bought Durant and Star cars, thinking that Mr. Durant had still a General Motors connection. Now at least the public is well acquainted with the automotive operations of the corporation. General Motors carries good will and patents at \$43,673,476, a figure rather oddly precise.

Mr. Swayne belongs among those excellent executives who can do an abundance of work with an appearance of leisure. His office is lined with etchings of famous financiers, of whom Andrew W. Mellon is the only contemporary. When he frowns a tornado-shaped cloud, with the funnel part at the top of his nose, gathers on his forehead. But he does not frown very often, and although he is not much interested in the more glittering hobbies of many of his fellow vice presidents, he finds time enough for good food, good pictures, good music. He likes to settle himself into a comfortable chair and philosophize on men and matters. At sixty (he retired, but only temporarily, in 1918) and with a job that would be overpowering for many a younger man, Mr. Swayne has retained a capacity for labor and, more remarkable, an enthusiasm for life.



U. & U.

JAMES DAVID MOONEY is head of the export and overseas group. The world is Mr. Mooney's village; the radio is his telephone; the *Leviathan* his commuting yacht. He has just completed a world tour, itinerary of which was scheduled as follows:

Dec. 6	Sail from New York
Dec. 14	Arrive London
Dec. 16	Take <i>Golden Arrow</i> to Paris
Dec. 19	Take Paris-Lyons express
Dec. 20	Arrive Marseilles and embark S. S. <i>Melosia</i>
Dec. 25	Arrive Port Said
Jan. 3	Arrive Bombay
Jan. 8	Arrive Madras
Jan. 16	Arrive Singapore
Jan. 18	Arrive Batavia
Jan. 27	Back to Singapore
Feb. 3	Arrive Hong Kong
Feb. 6	Arrive Shanghai
Feb. 9	Arrive Kobe
Feb. 10	Arrive Osaka
Feb. 15	Take <i>President Grant</i> to Honolulu
March 5	Arrive San Francisco

He is in London as often as in this country although he has an apartment in Manhattan

and a house at Oyster Bay. But he is equally at home in any of the twenty-three export centers with which General Motors has so profitably sprinkled the earth's surface.

Mr. Mooney is young, Irish, restless, enthusiastic, and popular. He has an exceptional memory for names and faces—a memory which is one indication of that interest in people around which so much of his success has been built. He staffs his foreign offices, as far as possible, with natives; he employs native labor; he respects native customs. Mr. Mooney knows that a maroon car cannot be sold in Japan, because maroon is a color reserved for royalty; that yellow means mourning to the Chinaman and green bad luck to the Indian. Such facts flit through his mind as he speculates on how many cars can be sold in Central Africa in 1940. It has often been argued that the American business man abroad is not sufficiently observant of foreign customs and tradition, but against Mr. Mooney no such accusation can be brought.

Mr. Mooney also appreciates the difficulties confronting the American abroad. The wife of a General Motors' export man, stationed in a distant Asiatic station, was pregnant, and had little confidence in local obstetricians. She was therefore kept in daily touch, by cable, with her family doctor in New Jersey. After the baby had been born, in accordance with approved and modern instructions, Mr. Mooney cheerfully paid a communications bill which has subsequently become exaggerated into thousands of dollars.

Mr. Mooney, once a reporter, occasionally writes on the merits of industry. In the *Century Magazine* for August, 1928, he argued that man is distinguished from the lower animals by "the urge to create," that for a long time the creative impulse expressed itself in the arts, but that now "the gamut of all the arts has been run over and over again" so that "sounder mentalities" have turned to "applied science and . . . commercial and industrial progress." Posterity, believes Mr. Mooney, will consider the business man the creative genius of today.

Copper Briefly Considered

The "forever" of eighteen cents.

THINKING of America as a triumph of incredible cities, machines, trade-marked merchandise, ingenuity, energy, and salesmanship, Americans are inclined to forget what Europeans never forget—that our modern and industrial greatness has a ready-made foundation of "natural wealth." The world's first period of heavy copper consumption culminated during the War with the following statistics for production of copper in 1918—a ton being worth about \$360, although it was then worth near \$500:

United States	969,000 tons
Chile	118,000 tons
Japan	100,000 tons
Mexico	83,000 tons
Canada	58,000 tons
Spain and Portugal	51,000 tons
Australasia	49,000 tons
Peru	49,000 tons
Africa	34,000 tons
All other countries—less, much less,	approaching zero.

Never again is the United States likely to produce such an elephant's share of the red metal. Indeed, ten years after 1918, the United States actually produced, for the first time since 1894, less than half of the world's copper. But so tremendous is the historic advantage of United States copper companies that they have come to own most of the South American production (to say nothing of whatever investments they or their financial associates may be making in Africa) so that copper, like automobiles, is predominantly, one is tempted to say exclusively, an American business.

But another but. Unlike automobiles, the copper business is a fully matured and hence beautifully organized business. The Webb-Pomerene Act permits American companies to combine to fix prices for export trade. So the price of copper shipped from the United States has been (since last spring's boom) neatly and definitely fixed at eighteen cents per pound domestic price (18.30 cents C. I. F., European price). But the laws emphatically do not permit American concerns to combine to fix the price of anything at home. Nevertheless, the price of copper delivered to the Connecticut Valley has been neatly and definitely fixed at eighteen cents. The Department of Justice has no complaint. It is a matter of maturity, not connivance.

Why eighteen cents? So calm and inflexible is the voice of an Anaconda or Kennecott spokesman when interrogated on the matter of price that it might be supposed there were some pragmatic sanction, if not biblical authority, for the proposition that copper is worth, now and forever, exactly eighteen cents a pound. The paradox is that the "forever" is truer than the "now." Let supply and demand have their way, and the price of copper would have fallen like an average stock on the Stock Exchange and at about the same time last year. But a hundred years from now it may seem incredible that eighteen cents could buy sixteen ounces of the one metal which is most perfectly suited for the electrification of the universe.

The coppermen come in between. They are not wasting office hours on the next century. And they are much too powerful to be buffeted about by a daily auction block application of

supply and demand. If they were totally unreasonable in their demands for eighteen cents, the mere fact that they asked eighteen cents would be a reason. They have, however, good reasons. These reasons arise from some of the curious aspects of the business, a few of which we will recite:

- (1) During twenty-seven of the last thirty-five years (which is to say during the grown-up life of copper) the consumption of copper has increased simultaneously with the advance in price. In only three years did a low price stimulate purchase of copper. (L. C. Graton of Harvard)
- (2) Copper is rarely an item of major expense in the uses to which it is put—e.g., cost of the building of a house or cost of telephoning your broker. This taken in conjunction with Point 1 makes it fairly certain that
- (3) The consumption of copper depends upon general prosperity and hardly at all upon the price of copper; so much so that
- (4) If last winter, coppermen had reduced the price to say, seventeen cents, that, far from stimulating demand, would merely have caused such excitement in the ranks of purchasers that everyone would have waited for sixteen cents, fifteen cents, fourteen cents, if not free copper.

Along with these reasons must be set one which is close to the heart of the matter. There is, broadly speaking, no such thing as a small copper producer. America controls approximately two thirds of the world's production, and 80 per cent of American copper interests are summed up in Anaconda, Kennecott, Phelps Dodge, and their subsidiaries or affiliates. Only to a small degree can other producers affect the price of copper by offering to sell lower—because they simply haven't got enough of it. In terms of personal authority the list is surprisingly short. Guggenheims, the Morgan partners, Hayden, Stone & Company (in particular Charles Hayden), the National City Bank (Charles E. Mitchell, Percy A. Rockefeller), Executives John D. Ryan and Cornelius F. Kelley of Anaconda, Executives Stephen Birch and Daniel C. Jackling of Kennecott, Executive Walter Douglas of Phelps Dodge—there, together with a few outstanding capitalists like Nicholas F. Brady and Arthur Curtiss James—there, for practical purposes, is the copper business. As affecting eighteen cents, the point is certainly *not* that these gentlemen have ever agreed together in restraint of trade. The point is that all of them have two kinds of mines, some that would be profitable at 13.5 cents and some which would not. Therefore they are not only the "big fellows"; they are at the same time the "marginal producers." In fact, the outstanding achievement of copper in this century has been to turn what seemed to be unprofitable ores into profitable ones. This, of course, was done in the pre-War days when fourteen cents seemed to be the biblical price of copper, much as it is hoped that eighteen cents will become the par price today. Low grade ores are made profitable by efficiency and large scale production on the one hand and higher prices on the other. Naturally the best ores are apt to be mined first. So every year the low grade



Courtesy A. B. Parsons

THE MAIN SHAFT OF RAY CONSOLIDATED, AT RAY, ARIZONA, A SIZABLE SUBSIDIARY OF UTAH

ore becomes relatively more important. So it is that all the great copper companies desire to maintain a price which will make their larger and lower grade ores profitable to mine and which will not restrict their mining to the diminishing first grade ores. The result of intricate calculations seems to fix an eighteen-cent rate as the price which will maintain the equilibrium.

From the nation's point of view such a policy seems wise, especially since the price of copper does not chiefly determine the cost of its use by John Citizen. And the great copper companies are so exceedingly strong financially that they are likely to be able to maintain whatever policy seems to them sound. (After this spring's peak of copper buying, a recession in copper prices is expected, but coppermen insist that this will not be a major compromise with the eighteen-cent principal.)

Africa

No discussion of copper, however brief, can neglect Africa. African copper is in itself a vast and magnificent story. There, within the last few years, has definitely been proven copper ores at once so abundant and so high grade (about 4 or 5 per cent, as contrasted with "normal" 2 per cent and Utah's 1 per cent) that all other discoveries pale before it in point of *possibilities*. By 1940 Africa may be producing as much copper as this country. Eventually it is certain to produce more. This in itself disturbs no one. For the increase in *consumption* of copper is likely to be so great that no one dares predict it. A few homely facts, such as that the Pennsylvania Railroad's present electrification plans call for 55,000,000 pounds coupled with the belief that *all* railroad lines may be ultimately electrified; that the brassification of plumbing is increasing 50 per cent yearly; such facts add up only too easily to the prediction that in 1940 the world will need 3,150,000 *tons* of copper, whereas now it is given only 2,000,000. Consumption, in short, is counted on to take care of Africa. The only trouble spot seems to be an outcropping of international feeling. During all these last industrial decades, Europe has had to bow to American copper. As long as copper moved "freely"—i.e., under the hammer of supply and demand—Europe had no complaint. But, if contrary to immediate laws of the hammer, the price of American copper should be held up, your European is apt to become resentful and to rush to Africa for relief.

However, this is speculative. For the immediate present the American copper business has little to worry about. Stocks of copper companies are expected to decline if the eighteen-cent price is allowed to break for a while. But fundamentally their position is as follows:

The past decade: Big money-making to offset the dark post-War days

[Continued on page 130]

World's Record Hill

The story begins 100,000,000 years ago.

STILL formidable, scarred, and unfriendly at the edge of its valley stands the Hill, which is the largest copper mine in the world. From it men have taken 3,161,000,000 pounds of copper. In terms of money, this has meant \$500,000,000 for Kennecott's Utah Copper Company. In the mountain there remain 625,000,000 tons of copper ore. In terms of money this is unpredictable.

In Bingham, a town one street wide that straggles four miles along the Hill's gulch, live the miners of the Utah Copper Company; twenty miles away, beyond the foothills of the Oquirrh Mountains, the Great Salt Lake sparkles like a steel shield and across a green valley lies Salt Lake City.

Such is the end of a story which began in the spacious days of the post-carboniferous era, some hundred million years ago. Where the Hill and the town now stand there swept the waves of a forlorn Mediterranean.

Later, the floor of this ocean was raised into a plain beneath which lay stratified limestone

and sandstone. Dinosaurs waddled down across it from the mountains in the west and foraged among the naked pithy stalks of its tufted forests. Some hundreds of thousands of years after the dinosaurs, a row of volcanoes stormed and smoked against the sky.

In the course of centuries, the volcanoes were worn down to the form of domed hills among which thermal springs steamed and glittered.

It was not until almost modern time—possibly 15,000 B.C.—that the glaciers advanced on a country already forested in spruce and pine. The Hill had by this time been shouldered up out of the porphyritic and salty strata of the plains, part of a range of mountains which the Indians, who later lived beneath them, called the Oquirrh. The huge salt lake that nibbled at its bottom shrank back across the plain where a few thousand years before the glaciers had retreated towards the north. The snows and rains of tens of centuries, fraying the Hill's rocky surface, exposed copper ore made in its depths and the columns of frozen lava in the throats of dead volcanoes.



Courtesy Utah Copper Co.

LOOKING UP BINGHAM CANYON AT THE BLUNT PROW OF THE HILL

Somewhere in Asia an ape crawled into a cave; men in Cyprus learned how to make brown swords and copper cups; a tribe of Indians rode their small horses across the desert plains of Utah. Sometimes they built small fires on the Hill, the signals of some dark and unremembered war. Perhaps an Indian stood on a nearby summit on the day when into the quiet, lonely country there came, finally, a long train of wagons and horsemen. The Mormons, bearded and sober, circled through a gap in the range on the opposite side of the valley and stopped to pray when Brigham Young declared, "This is the place."

If the Mormons ever learned of the treasure in the Hill they paid no attention to it. Changing the desert into a garden occupied all their time. They needed protection only from the Indians, and for this purpose the generous Government provided a platoon of the Californian Volunteers who were stationed nearby, at Camp Douglas. The officers, unlike the Mormons, liked picnics. On a summer day in 1862, after lunching beside the stream that gurgled in the rocky gutter of Bingham Canyon, they dispersed, each with a lady friend, to investigate the Hill. One of the ladies found a shiny stone and she showed it to her escort, saying, "Now what kind of a stone do you call that?" Such is the legend of the Hill; no one remembers the lady's name.

The officers spent their afternoon scrambling among the underbrush and filling their pockets with the first rubble that was ever carried from the copper mountain, but, in the game of find-the-thimble which is mining, they were only growing warm. Though the forgotten lady with her question had hinted at the previous secret, the men who swarmed into the canyon afterwards were not looking for copper but for gold.

The story of the Hill, for millions of years, had been a quiet wordless story, written by the rains and the slow suns setting; it became, suddenly, the history of the town that sprang up, in a four-mile row of rickety flophouses, brothels, and saloons, along the canyon. Its long crooked street flared with the bizarre and sinister excitements of the gold hunters. There were quick duels in its barrooms, and its hungry dream-ridden adventurers cursed or fought in the street at night and scoured the sides of Bingham Canyon during their day. By that time everyone knew that there was copper higher up and deep in the Hill, but even the richest veins of ore were narrow and assayed only about 2 per cent copper, and to a miner whose claim was called the "I Don't Care" that was not enough copper to bother about.

It was for silver and lead that General Patrick E. Connor, a famous Indian fighter of the district, got his friends together in 1863 and staked out the first real important claim, the Jordan. The Jordan remains today the claim on which is the main shaft of the United States Smelting, Refining and Mining Company which, with mines in Mexico, Alaska, and half a dozen states, began to take over the old claims and early companies as the gold and silver prospectors moved away. Today, this company (except for half a dozen minor companies) shares the district with the Utah Copper Company.

Even at the turn of the century, no one knew a way to mine 2 per cent ore profitably, and there was not, then, the huge demand that has come with the growth of electricity and the discovery that electric power can be laced to the ends of the earth with copper wire. With that demand necessity found a way, so that today 2 per cent copper ores are considered

relatively rich and even 1 per cent ores are mined in great quantities.

Daniel C. Jackling, in 1904, organized the Utah Copper Company. Instead of digging into the Hill and laboriously carving out of a porphyritic setting its scanty ore, he shoveled the Hill and the ore together into gondola cars which began to rumble, in the shuffling, regular rhythm of mass production, nineteen miles around the foothills of the Oquirrh Mountains to his milling plants. In 1904, if you had a big mine, you might take out a thousand tons of ore a day; each day Jackling now decreases the size of the Hill by nearly 100,000 tons of ore and dirt.

The appalling figures of the Hill's antiquity are less appalling now than the figures of its destruction. Twenty-three electric shovels grunt in the grooves along its sides, biting ten-ton chunks out of the rock, which they spew with fretful repetition into the apparently endless train of gondola cars which forty electric locomotives draw up and down the tiered declivities along eighty-two miles of railroad track. Three hundred and eighty million, nine hundred and eighty thousand tons of earth and copper have been in this manner taken away already. The smooth flank of the Hill has been carved into twenty-five amphitheatrical rows, separated by cliffs some sixty feet high. Along these convex levels, 2,100 miners blast the ore out of the rock, govern the shovels, brake the freight cars, and point their drills against the stone. Three billion, one hundred and sixty-one million pounds of copper have been taken out of the Hill, 10,200,000 ounces of silver, and 1,000,000 ounces of gold. The amount which these are worth, \$520,100,000 would have paid for the digging

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Courtesy Anaconda Copper Mining Co.

HE WORKS FOR ANACONDA, UTAH'S GREAT RIVAL



Courtesy Anaconda Copper Mining Co.

AN ANACONDA CONVERTER IN PONDEROUS ACTION



Daniel Cowan Jackling

Operating genius of Kennecott and Utah.

THE rampant, two-fisted heroes who whelped the American copper industry have rushed on to their stormy Valhalla. When thunder rolls and crashes, more than likely it is Fritz Augustus Heinze sapping and blasting under some other tough old angel's cloud, showing off to Thor and Odin the trick with which he took more than a million dollars' worth of Montana copper in the wild nineties at Butte. Fritz, until he joined forces with him in a daring, freebooter's escapade, was Clark's bitter enemy—the Hon. William A. Clark, who died a United States ex-Senator in his Fifth Avenue mansion of 121 rooms heated by a furnace which burned seventeen tons of coal a day—and Clark was the grandest, most productive frontiersman of them all, not excepting even Irish Marcus Daly. When bolts of lightning shoot from Valhalla hot and blue, it is only Clark and Daly saying in a gusty, forceful way what each thinks of the other—the coyote, the dog robber, the two-bottomed baboon!

That was copper, that used to be copper. Snarling, clawing, crippling your rivals, then, while they howled with tails between their legs, nuzzling down to suck the rich, bright blood from Nature's swelling veins. But copper is not like that now.

Copper today is a product of the laboratory—rather of the biggest laboratories in the world. A whole mountain at Bingham, Utah, has been put on a scientist's worktable. He scoops it up in ten-ton measures, puts it through test tubes and retorts made not of glass but of steel and into strongest refractories, turning out at last a product as chemically exact as the pills your druggist makes.

Moreover, rich rewards are achieved working with an ore so low in copper content (1 per cent and less) that it used to be called not ore but simply "dirt." The man—the scientist on a giant scale—who created the laboratory that is test-tubing and abolishing a mountain is certainly a genius. His workmen in Utah call him "the boss." His rich neighbors in California call him "Jack." But Wall Street and the East know him from afar, with huge respect for his demonstration that lean dirt can be turned into fat millions, as "Mr. Daniel Cowan Jackling."

People with money

Jack is big (6 feet 1 inch, 225 pounds), breezy, direct, inspiring. But Jack is also thoughtful, a high-gear brain worker, wholly dependable, and, when pains must be taken, slow. His great initial problem was to get money, and bankers do not trust a man who moves too fast, especially in a new direction. Back in the years when Henry Ford had not yet shown the way to mighty profits from mass

economies, Mr. Jackling dreamed and fashioned his vision of what could be done with stupendous tonnages of low grade ore and then, as he recently said, "I lost no opportunity of talking about it to people with money."

Having heard, the people with money wanted to be shown. Who was Jack anyway? An orphan, for one thing, like that other mining engineer, Herbert Hoover. His father and mother ran a forwarding business over the Santa Fe trail at Hudson, Missouri, before there was a railroad. Aged two, he was taken in by his maiden Aunt Abigail, who next took a husband. Pioneers by nature, the newly-weds and Jack pressed on into the West, seldom farming in one place for more than a year, poor and with little learning, but healthy, self-reliant.

"Got my banker!"

Owen D. Young has told how, as a hot and tired farmer boy, he was inspired to enter his present profession by the sight of some lawyers actually making money arguing at their ease in the cool county courthouse. Similarly Daniel Cowan Jackling was dazzled into the career of school-teacher by the success of a friend who was making thirty dollars a month and board. If teaching were only better paid, Jack might still be a pedagogue as Mr. Young remains, by definition, a lawyer.

In the early nineties eager young Professor Jackling was already chief of the chemical department of the Missouri School of Mines at a salary which must have seemed munificent. But the quick brain of Jack was and is a two-way street. He retraced his path to penury, grew hungry and glum in the gold mining camp at Cripple Creek, Colorado, looking for the job he had decided would have a bigger future than teaching. Within thirty-six hours, nineteen mines refused to have him. By a mere fluke, after he had spent his last copper, he finally got odd-job work at J. C. Staat's assay office in 1894, and within the year was in charge of the Florence Reduction plant and then chief metallurgist of Captain De Lamar's company in Mercur, Utah. For the next ten years he was building up his reputation as an efficient gold and later copper mining boss, but as early as 1898 he was sent to report on the mountain of low grade copper-bearing porphyries at Bingham, Utah, and, though years passed before anyone else could see with his eyes, the vision of its possibilities grew and swelled.

In 1903 the Man of Vision tried but failed to get an option from the principal dirt owner at Bingham, a certain Colonel Wall. More than ever earnestly, glowingly, and interspersing figures with funny stories did Jackling now talk to people with money. They grudged, but



International
MASTER OF PORPHYRIES: "JACK"

loosened up just enough to give him a chance to prove the methods he proposed. This could not be done in an ordinary laboratory, any more than Henry Ford could have proved straight line production with paper doll workmen and an assembly line of autos made from penny match boxes. The proof of Jack's pudding was ascertained on a working scale which was then considered, and is still considered, of great magnitude, using a concentrator for the ore of some 700 tons per day (1,400,000 pounds) capacity. There was no basic new invention, either by Mr. Jackling or anyone else. His supreme genius is as an organizer. It is characteristic that he was the first to use the steam shovel in mining. A coördinator, he was a man who constantly surprised and sometimes chagrined the makers of the best and strongest and most expensive machinery by ruthlessly rebuilding, changing, and adapting it to work with greater speed at higher efficiency. After a year and a half of tireless tests and preliminaries, Jack began to have great news . . .

One of the first people with money to grasp fully the enormous significance of what Mr. Jackling had proved he could do was cosmopolitan Charles Hayden. Three cold million dollars were now needed by Jack, who ten years before had stood hungry without a copper in his pocket. Associates of Mr. Hayden, very important among these being the Guggenheims (now Murry, Solomon R., and Harry F. Guggenheim are directors of the board of Jackling's Utah Copper Company), joined him in supplying the three million, and when more was needed, more. Some \$10,000,000 all told was invested in what is now Utah Copper Company. Dividend returns have exceeded \$204,000,000, and the company retains a surplus of \$68,000,000. Incidentally, Charles Hayden is today first vice president of Utah Copper and, in that small particular, subordinate to President Daniel Cowan Jackling who, if he were so minded, might paraphrase a popular post-War ditty thus: "I've Got My Banker Working for Me Now!"

"Let me send for Jackling," said Barney Baruch to someone close to Woodrow Wilson, when the army, the navy, and the Allied governments were deadlocked with American explosive makers in regard to what ought to be the price of war explosives.

Protesting that he knew nothing about explosives, which was almost true, Jack came to Washington for a dollar-a-year as director of Government explosive plants and, in the estimation of Mr. Baruch, "saved the Government a minimum of \$43,000,000 and a maximum of \$58,000,000, a considerable sum even in these days of billions."

One of the great industrial triumphs of the War was Mr. Jackling's completion of a \$100,000,000 explosive plant in approximately one hundred days from the time ground was broken to the production in quantity of T.N.T. Again he had shown consummate organizing genius, and Congress voted him its highest gift, the Distinguished Service Medal. When the chorus of sneers at dollar-a-year men began to rise, General Hunter Liggett said shortly and decisively: "I consider myself honored in being permitted to bestow the Distinguished Service award on Mr. Jackling for the War Department." Hired for one hundred cents a year, Jack saved money at the rate of more than a dollar-a-second, which, after all, is only \$31,536,000 a year.

Jack in Bantuland

Just now Mr. and Mrs. Jack and three friends are cruising on his newest, most splendid yacht along the only continent which American coppermen fear—Africa.

The narrow limits within which American coppermen work is suggested by these facts: Jack gets approximately eighteen pounds of copper from a ton of Bingham ore, and, with copper at its present price of eighteen cents per pound, this means that for \$3.24 he must dig out the ton of ore, haul it to the mill, grind and



Cliff Bray
"JED" SHILLING, IN CHARGE AT BINGHAM

concentrate it, haul the concentrate to a smelter, smelt it, deliver the refined copper to the buyer, and still make a profit.

The average content of American ores in sight is 1.75 per cent copper, whereas in Africa it is about 4 or 5 per cent. There is no American mine remotely comparable to the just discovered mine of 35,000,000 tons of ore reserve averaging 9 per cent copper, which is as yet unnamed, but which lies in northern Rhodesia, a part of the Rhodesian Congo Border Concession.

At this time the African fields both in the Belgian Congo and in northern Rhodesia, but particularly in the latter, are on the brink of developing from large to vast production. It is true that wages for native labor are very low—twenty-four cents a day in Rhodesia. But the natives are so worthless, even at that price, that there is much talk of importing white labor. Also, the long haul from Africa is a great factor in favor of American producers. But all the same they are gravely worried.

Pleasure

This yachting to Africa is not strictly for business. On the contrary, it is the result of a day many months ago when Jack determined that, since he had never been around the world, he would forthwith go. And forthwith he went. That for him the itinerary should include Africa was as foreordained as that a college youth should include Paris or an artist, Italy. For many years Jack's yacht has afforded him the most perfect combination of business and pleasure. Especially familiar to the icy waters of Alaskan bays was the famous old yacht he sold in 1917 for \$650,000. He named it romantically the *Cyprus*—after the island from whose name the word copper is derived and on which early Romans dug their metal.

Generous in the broadest, fullest sense, Mr. Jackling seldom yachts, hunts, or enjoys any other recreation unless he can share it with several friends, "several" usually being about fourteen. Fish stories he does not tell, but he spins yarns about wild turkeys with the gusto of a southern colonel launched upon that grand theme, "niggers." (Friends of Jackling seldom

call him "Colonel," though he has served with that rank on the gubernatorial staffs of two states—Colorado and Utah.)

"One time, sir," says Jack, grave faced, "one time I saw a buck turkey—these birds can run faster than other birds fly—one time I saw an old buck catch up with a charge of buckshot and another one running a mighty close heat with a rifle bullet. Run—why those turkeys just barely touch the ground with their toes and use their tail feathers like a rudder! They're as fast as an airplane and a lot too fast for any ordinary hunter."

Fortunate will be those copper initiates who may presently hear him talk no less vividly of Africa. For while Africa is not his bailiwick—out there the great name of Beatty shines—Daniel Cowan Jackling occupies a unique position among all American coppermen. He is not merely the genius who turned the lean porphyries into wealth so that in spite of all the ore mined since 1904 we now have more usable ore than when he opened Bingham Canyon. He is also the operating genius of Kennecott, pride of Guggenheims, Morgans, and Charles Hayden, which, on two continents, produces more copper than any other company, and shares with Anaconda the dominance of the whole industry. To him, the bonanza mines of Africa and their peculiar problems, so different from those he faced and vanquished, must constitute a fascinating challenge to genius. For Jack may be considered as having arrived at that position where the problem holds more fascination than the result.



Cliff Bray
ONE OF UTAH'S TWENTY-THREE ELECTRIC SHOVELS



Courtesy A. B. Parsons
HE WORKS (AS LITTLE AS POSSIBLE) FOR KATANGA



WAR. This and the following pictures are by the ace of aerial photography—Captain Alfred G. Buckham, concerning whom there is a note on page 18



SCOTLAND'S CAPITAL SHOWING EDINBURGH CASTLE, PRINCESS STREET, AND MANY A KIRK



THE RIVER FORTH BEFORE IT BECOMES A SHIP-LADEN FIRTH



DOWN THE RHONE INTO FRANCE FROM ITALY



EUROPE'S GREATEST PORT AND CITY: TOWER BRIDGE. (*The great building behind the Tower of London is the post of London authority*)

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Air & Rail

A fluttering industry considers its ailments, takes counsel from the kindred industry of the rails. Its principal problem being neither overproduction nor crashes, but management.

AS THE WAR gave aviation its first great impetus, so did the War give it a flavor. For a decade after the last young ace drained a flask of Scotch and jumped into the cockpit of his bomber, the fine flavor of recklessness hung about this new-born sport and industry of the air. As a result, while the world's store of adventure and romance was measurably renewed, very little was added to the world's knowledge of transport.

For transport is a different matter altogether. Transport is not created in a series of gallant, superhuman bursts, but by sustained and sober effort. There is not time, figuratively or literally, for flasks of Scotch in the transport business. General Atterbury proudly told a House committee: "Railroad employees have been at all times, and are today, the most temperate body in any industry." Such men are necessary to transport; they are the proper complements of schedules and safety and economy.

Thus aviation, which was resolved at all costs to become transport, had to get rid of the flavor left by the War and its daring aces. This, in the year following the great trans-Atlantic flights, it set out to do, calling the process "getting down to business." In that year, production of planes jumped from 1,995 to 4,345, and all of them were sold.

. . .

It was then freely predicted that the airplane would become as common as the automobile, that we (as citizens, as sportsmen, as business men) would move about our appointed tasks via the air. Innumerable chambers of commerce staged innumerable pageants of transportation in which the last float showed us about to soar to a conference or a dinner party. There was every reason to expect the float to be a roaring success. Not to submerge its predecessor, the automobile, perhaps, any more than the automobile submerged the train or the train submerged the ship. But certainly to call forth as many cheers and checks as any of these.

The cheers it has. They deafened a thousand cities throughout the summer of 1927, and their happy echoes heartened the airmen in 1928 when aviation was "getting down to business." In 1928 and 1929 they built 928 airports; they produced 10,080 planes; they made us all air-minded. Ask any business man. "You bet I'm air-minded . . . aviation is the coming thing . . ."

Thus the cheers; strangely, the checks did not follow. And in 1929, when the railroads piled up the highest net incomes (\$1,274,774,188) in their history, fully half the aviation industry lost money.

. . .

Something, obviously, was amiss. In spite of an intricate structure of holding companies, operating companies, manufacturing companies, the aviation industry was not yet a going concern. Such glamorous publicity had attended its rise as never before illuminated an industrial enterprise (cf. the

stock market manipulations which attended the birth of the railroads: Lindbergh v. Jay Gould). It was comparatively free from the governmental interference which has so often balked and baffled the railroads. No lack of capital hampered it; while the first railroads turned to England and Holland for support, the aviation companies were generously nourished in New York and Boston and Chicago. It had the tremendous advantage of timing its birth to coincide with the very peak of national prosperity. Yet it had somehow failed to "get down to business."

Many immediate explanations suggested themselves. The most usual was overproduction. By the latter half of 1929 the demand for planes had noticeably slackened, while the expansion programs of the manufacturing companies were in full swing. In all, some 6,034 planes were built and nearly 800 remained unsold. Many of the smaller companies closed down altogether, and the larger ones are now running with skeleton organizations. More companies will fail within the next nine months.

After overproduction, the reason most commonly given for the industry's setback was fear. A perfect plane flies proudly like a white, snarling bird in the blue desert skies above Albuquerque in New Mexico. The ship flies into thunder. Skies darken and are illumined again by lightning. The ship flies to oblivion and the passengers to death in flames. It is an easy thing for the citizen to remember, much easier than statistics. (January-June, 1928: one death in every 169,944 miles flown. January-June, 1929: one death in every 442,530 miles.) The business man, noisily air-minded, quietly avoids the air.

A third reason is expense. While railroad fare approximates five cents a mile, the passenger lines were charging ten cents. It cost the Los Angeles business man about \$300 to fly to New York. Planes with capacities of fourteen and fifteen took off with one or two, or four or six passengers. As it costs somewhere between \$1.00 and \$1.25 to fly a fourteen-place, tri-motored transport plane one mile, a revenue of forty cents or sixty cents a mile leaves a considerable deficit.

Each of these three factors—overproduction, danger, and expense—without doubt played its part in the debacle of 1929. The stock market crash aggravated it. The failure to realize that airplane buying is seasonal (Who would buy a plane at Christmas?) was another cause, as was an uncertainty on the part of the manufacturing companies as to just what they were attempting to do. This year they must decide whether they are selling airplanes as General Motors sells automobiles, a plane for each purse, two planes for each family, or are making transport equipment as American Car & Foundry Co. makes locomotives and coaches and freight cars. The airplane must renounce its kinship, either to its yokefellow the automobile, or to its yokefellow the train. If it abandons its dream of the World-in-the-Air, it must concentrate on the problem of fulfilling its function as

a carrier. And the best way is to imitate the railroad. For behind and beyond the many contributing difficulties of 1929, however, there is a more general trouble which includes all of them. While the War flavor of adventure has been divorced from aviation, the compact organization of business has not taken its place. The industry is still haphazard, confused, opportunist. As 1930 opens, its most responsible leaders are thinking not so much of overproduction and crashes as of the curiously unromantic problem of personnel. The measure of the industry's recovery, it becomes apparent, is the measure of its organization. "Get down to business" is particularized into "Get down to railroading." Just how much readjustment is required and just how to achieve it are the current preoccupations of the industry.

Organization and personnel

Already the industry has an elaborate framework. It has merged and integrated quite as energetically as industries many generations its seniors. Within the two years which have elapsed since the end of the Trans-Atlantic Era, there have come into intricate being at least four major groups which present all the appearance of large, integrated industrial units. They are briefly summarized in this article. As each group includes practically every branch of the industry, each group has shared in the 1929 depression.

There is nothing inherently unsound about this framework. Its weakness lies not in its structure, but in the bricks upon which it relies to fill it in. Here is an industry which assembles its parts, concentrating its direction in the hands of a few executives, and then fails to find the executives. Of all lessons to be learned from the railroads, management is the first and greatest. It was poor management which allowed the entire industry to expand while demand was slackening; poor management is responsible for the wild fluctuation in the industry's rate schedules. Every intelligent critic of the industry recognizes this weakness.

Not every aviation executive is incompetent, of course, and the two years of integration have developed a few distinguished leaders. Outstanding among them is Frederick B. Rentschler, once the president of the Wright Aeronautical Corp., the organizer of Pratt & Whitney Aircraft Corp., and now not only the President of United Aircraft & Transport Corp. but as distinguished a figure as the industry can boast. It is possible to estimate that the profits of the aviation industry in 1929 totaled \$15,000,000. Of this, United Aircraft & Transport was responsible for more than \$9,000,000, and the credit for this bright showing in a dark year falls squarely on the shoulders of Mr. Rentschler. Aviation needs more Rentschlers and fewer stockjobbers, pilots, and promoters in its management.

Leaving the actual management division of the industry, the personnel picture becomes considerably more cheerful. It includes many excellent engineers, sturdy Giuseppe Bellanca serving as a good example of the type of engineer who constantly works toward a solution of the problem of proper equipment. And its pilots are steadily improving as their experience increases. Few pilots on transport lines have less than fifteen hundred hours of flying behind them, although their licenses require only two hundred. By December 31, 1929, there were 9,815 active pilots licensed in the country, while 30,000 student permits had been issued. Flying schools, which began in a rather haphazard way, are now handling their vitally important work more seriously and more intelligently. The Curtiss-Wright Flying Service is a notable leader.

[Continued on page 84]

Aviation's Aces

Three Good Engineers

"The flight," said Giuseppe Mario Bellanca, "has not added anything of moment to the science of aviation." The flight in question was made by Chamberlin and Levine, from America to Germany, and in the Bellanca-designed cabin monoplane, the "Columbia." Bellanca, a tiny five-foot-three Sicilian, has been responsible for the cabin monoplane's design and popularity. Now, at his own Bellanca Aircraft Corp. at New Castle, Delaware, he is at work at designs new and old.

"A very good test," observed Igor I. Sikorsky, "of the strength of that wing structure." The test was the crash of one of his multi-motored planes, piloted by himself, against a large and sturdy tree. The plane was scratched, but the tree was gouged. The first to build successful multi-motored airplanes (in Russia, in 1913), his current interests are centered upon amphibians.

Anthony H. G. Fokker was born in Java, was educated in Holland, became famous in Germany, and now, just turning forty, lives in the United States. Planes of his design fought the War for Germany, carried Byrd to the North Pole and across the Atlantic. Still one of the air's best engineers, he has allied himself with General Motors and Western Air Express.

Three Good Pilots

"I guess we can't go today, Daddy," said John Doolittle, to James Doolittle, as the Doolittle family looked at the damaged Lockheed Vega plane that had broken its landing gear before leaving the ground. So Lieutenant Doolittle, who in January resigned from the Army to take a position with the Shell Oil Company, went West by train. One of the older generation of aviators, the Lieutenant is famous for his experimental "blind" flying and holds the official U. S. seaplane speed record of 245 miles per hour.

Trans-Atlantic aviators who come down in mid-ocean are usually heard of no more, but George W. Haldeman was fortunate enough to land his plane in the vicinity of a Dutch oil-tanker. For it was he who piloted the plane in which Ruth Elder unsuccessfully attempted to become a girl-Lindbergh. Now he is testing Bellanca planes at New Castle, Delaware.

The ranking air mail pilot of the United States is E. Hamilton Lee, whose flights add up to a total of more than 1,250,000 miles. Pilot Lee has been flying for some sixteen years, has spent some 13,000 hours in the air (more than 8000 in the air mail), and has never had a serious accident. He flew on the first air mail line established by the government and was a pioneer pilot on five divisions of the New York-San Francisco route.

Three Good Presidents

Harris M. Hanshue twenty-five years ago adopted the young automobile business and five years ago took on another infant industry when he organized the Western Air Express. He began with a contract to carry mail between Los Angeles and Salt Lake City, points between which his line now brilliantly operates mail planes by night and twelve-passenger cabin planes by day. In 1928 Mr. Hanshue bought control of the Fokker Aircraft Corp., now linked with General Motors.

Frederick B. Rentschler was born to engines before the air age. At Hamilton, Ohio, Rentschlers made marine engines and sugar machinery. From Wartime service he emerged to become president of Wright Aeronautical Corp., where he quarreled and departed to Pratt & Whitney Co. Recently he brought Pratt & Whitney Aircraft Corp., second largest airplane engine company, into the successful United Aircraft & Transport Corp.

Juan Terry Trippe is head of Pan-American Airways, which operates some 13,000 miles of air line. Mr. Trippe's first experience in air transport came when he got the air mail contract between Boston and New York—the first private contract granted by the government. Now he has the largest air line in the world.



FOKKER F-32

THE most commodious plane yet built in the Americas is the Fokker F-32, above. That skilled Dutchman, Anthony Herman Gerard Fokker developed this ship in his United States factory at Hasbrouck Heights, New Jersey. It is a high-wing monoplane and that single wing spans ninety-nine feet. It has 1,350 square foot area, sufficient space for the construction of a five-room cottage. Below the wing and at each side of the cabin are a pair of Pratt & Whitney *Hornet* motors rigged tandem, furnishing 2,100 h.p., which can drive this great seven-ton plane plus its four additional tons of useful load at 157 m.p.h. The usual traveling speed, that is, the cruising speed, is 120 m.p.h. The plane lands at the express train speed of 60 m.p.h. Those half ellipsoid hoods over the wheels are their "pants," which

reduce wind resistance by a great amount. The cabin contains four rooms, with adjuncts of a kitchen, a clothes closet, and two lavatories. Passengers can walk fully upright in those rooms, or they may sit in thirty softly padded armchairs, and by night they can sleep in sixteen berths. Forward of the passenger compartments is the poop where two pilots sit. Either can control the plane. Back of the passengers is the compartment for baggage, mail, and express. Cost of this Fokker F-32 is \$110,000 as described. No individual yet owns one. Fokker Aircraft Corp., however, is prepared to fit this model out for individuals, as a flying home or office. The first of these transports was flown around New York early this year. In the last test of the plane the pilot, attempting to take-off on two motors, zoomed it low over

some houses on Long Island. It ripped off their roofs and wrecked itself, but with no serious injuries to its passengers. The company immediately built another and sold it to Western Air Express, which with General Motors owns most of the Fokker stock. The Indian head and arrow on the illustration is Western Aircraft's symbol. The Fokker symbol is Anthony H. G. Fokker's last name, written cursively, like Henry Ford's trade-mark.

GIUSEPPE M. BELLANCA, 44, is a Sicilian so temperamental that he is often termed eccentric. His technical knowledge is sound, his skill versatile. This story of him is true: two engineers of a competitive firm went spying to his factory at New Castle, Delaware, where he was preparing to test-fly a new ship. He recognized them, fetched them comfortable chairs, and suavely remarked, "Gentlemen, sit down. Perhaps I can be of some assistance to you. I will bring you the blue prints if you wish, and explain all. And when you have copied this plane, I shall have a new model for your inspection." The first of his planes to win popular fame was the *Columbia* in which Clarence D. Chamberlin and Charles A. Levine flew across the Atlantic three years ago, close after Colonel Lindbergh. The last trans-Atlantic flight, that of Roger Quincy Williams and Lewis A. Yancey, last year, was in his *Pathfinder*. Those were special jobs, built to carry an abnormally huge load of gasoline. The standard plane of his which has become a commercial and private favorite is his *Pacemaker*, depicted here. It is a high-winged monoplane, single-motored, capable of seating six comfortably. Its high speed is 145 m.p.h., its cruising speed 122 m.p.h., its price \$14,950. In Canada where many *Pacemakers* are used to transport mail, express, and men to the widely scattered mining properties, the wheels are replaced by pontoons in summer to alight on the ever-present lakes and rivers, by skis in winter for ice and snow landing.



BELLANCA



BOEING MAIL PLANE

THE chrome yellow biplanes with bright green fuselages which howl every day and night over the 2,000 miles between San Francisco-Oakland and Chicago are what happened when Seattle's William Edward Boeing smashed his plane fifteen years ago. He fixed it so well that he decided that he could build a better plane himself. He hired a one-room factory and thirty men. The money came from his rich lumber and mining properties in the Northwest. His planes were so good the Navy bought them. The contract to carry the mail between San Francisco and Chicago was up for bid. He won it, and designed mail planes to do the work efficiently. Now his employees number more than 1,400. The factory they work in has more than a quarter of a million square feet of floor space. In it Mr. Boeing, genial, bespectacled executive, makes seven kinds of commercial planes, seven kinds of military. His biggest product is a trimotored biplane carrying eighteen persons. A very useful ship is the mail plane, above. The pilot sits in an open but well-sheltered cockpit. His passengers (there is space for four) sit in the heated cabin, as he flies them up to 129 m.p.h. Cost is \$22,500. A traveling salesman might well use a variant model of this same mail plane, with only two passenger seats, but with ample space for the storage of his samples.

EARLY in March a grayish amphibion clumped down a dock at College Point, L. I., where Long Island Sound narrows into the East River, and splashed into the water. The plane was a Sikorsky sesquiplane amphibion (Sikorsky spells it thus) similar to the one here shown, except that this one has two 410 h.p. Pratt & Whitney *Wasp* motors, and that one had two 575 h.p. Pratt & Whitney *Hornet* motors. The sesquiplane (wing-and-a-half) is the favorite construction of Igor I. Sikorsky, Orthodox Russian *emigré*, who

has established a colony of fellow Orthodox Russians at Stratford, Connecticut, suburb of Bridgeport, where he has his new Sikorsky Aviation Corp. factory. Suspended from the 72-foot upper wing is the hull with seats for eight to ten persons. Attached to each side of the hull are the stubby half wings, each with its float. Pilot of that Sikorsky amphibion which flopped into Long Island Sound was Captain Boris Sergievsky, *emigré*. Instead of passengers he carried two long tons of dead weight. He was about to try for an altitude record. He removed his landing wheels to conform with seaplane specifications, started the motors, and climbed to 19,500 feet, a record for a seaplane loaded so heavily. Next day with

the same load he raced it around a level course at 132.5 m.p.h. That was slightly better than the standing 130.1 m.p.h. loaded seaplane record, but not enough to win him official kudos. La Federation Aeronautique Internationale requires that a contender surpass a speed record by at least 5 m.p.h. Nonetheless Igor I. Sikorsky was happy. He is fully as temperamental as Giuseppe Bellanca, and will tear up a contract as quickly when disgruntled. "Do you want a plane that will fly you anywhere you will?" says he, in effect, in his pure, Russian-accented English. "Here it is. If you don't like it, . . ." The Sikorsky is primarily a transport. But many wealthy individuals own them.



SIKORSKY AMPHIBION

Rates

If ten cents a mile is obviously too much to charge for passenger transportation, five cents a mile is equally obviously too little. And at this latter rate, some 50 per cent of the mileage flown by commercial planes can now be covered. The drastic slashes inaugurated by T.A.T.-Maddux last January have brought passenger fares to the level of railroad fares and, incidentally, to a level where the transport companies can *never* show profits, no matter how air-minded and *air-bodied* the public may become.

Most spectacular of the cuts, naturally, was the transcontinental rate, which fell from \$267.43 to \$159.93, or \$1.47 less than the best train and Pullman fare. The results of the slash are important. T.A.T. now carries practically full loads and estimates its traffic increase at nearly 600 per cent. Yet while it runs its fourteen-place Fords and eighteen-place Curtiss-Condors, it must lose money though every place is filled. Suppose, with economies in operation, the company's cost (this includes depreciation and insurance, about 60 per cent of a plane's operating cost) can be stabilized at ninety cents a mile, the gross revenues from fourteen passengers cannot exceed seventy cents a mile. T.A.T. flies each mile, therefore, at a loss of at least twenty cents.

This is absurd, is conceded by all the companies to be absurd, and is a good example of the current disorganization of the industry's schedules. Neither the ten-cent rate nor the five-cent rate bears any relation to the value of the time saved to the passenger; neither rate is fixed at that point known as "what the traffic will bear"; and neither rate gives the transport company a fair return. The only thing that can be said for the five-cent rate is that it may, this winter, so accustom the public to the use of the airplane that later they will be content to pay more.

At some point between the two extreme rates must lie the solution, a rate just to the company and reasonable to the passenger. As airplane rate-making has been begun by the trial-and-error method, so we shall see, within the next few years, a constant juggling of rates, now up to seven cents, now down to six cents, until at length a resting place is found, probably near six and a half cents.

One bright spot in the situation is provided by the terms of the Watres Bill now before Congress. In addition to the help this measure promises the mail transport companies, it allows the Postmaster General to give air mail contracts to existing passenger lines, the basic pay for the first hundred pounds being thirty cents a mile. If the space provided is not used for air mail, the Postmaster may use it for first class mail. This is in effect a Government subsidy, and will almost level seventy-cent revenues and dollar costs.

In the case of the mail transport companies, the Watres Bill goes further. Nothing could have been more ridiculous than the contracts which ranged from \$3.00 a pound for a line 200 miles long (New York to Boston, Colonial Airways Corp.) to seventy-eight cents a pound for a line 770 miles long (Chicago to Atlanta, Interstate Air Lines). The Government was spending, each year, about \$3,000,000 more than was allowed by Congress. And the astonishing inequality of the rates worked hardships on the lines at both ends of the scale. Aviation Corporation knew that its \$3.00 rate (on Boston-New York line) would not last and provided no satisfactory basis for permanent figuring; on the other hand, in taking over the Chicago-Atlanta line, it was absurdly underpaid for its work.

Under the new space-mileage basis, rates will spread from thirty cents per mile for a hundred pounds to a dollar per mile for fifteen hundred pounds. An additional sum, up to twenty-

five cents a mile, will be given for night flying and flying over hazardous country. This plan is approved by the industry, even by that portion which will receive less than it did on the old poundage basis. It will generally strengthen the mail transport companies, provide them with assured incomes, and introduce an element of stability much needed and long wanting.

Express

So closely has the industry kept one eye on passenger transportation and the other on mail carriage that it has almost ignored a third, and potentially profitable, source of revenue—air express. In the past three years, producers and distributors have shipped 5,844,826 pounds by express, a fraction of the amount available. Although eighty-two cities are air express stops, one must charter a plane to send anything into Philadelphia, Baltimore, Richmond, Atlanta, Mobile, New Orleans, San Antonio, El Paso, San Diego, Spokane, Helena, or Buffalo. Serving only a narrow band across the continent, the transport companies avoid northern New England, the entire far Southwest, the entire South, and the entire Northwest.

The trouble has not been with the Railway Express Agency, which is more than anxious to coöperate. Its president, Mr. Robert E. M. Cowie, made practical suggestions to the aviation companies: "What we need is planes in regular service with the ability to carry a pay load of at least five tons. When our air lines are equipped with such units, commercial aviation will follow the course of every other transportation system, that is to say, the profits from low volume emergency traffic . . . will shrink into insignificance in comparison with those to be obtained from *the regular and constantly increasing flow of routine business. We must stop marveling at the little romance of stunt commerce.*"

Thus the advice of a railroader. The aviation companies could only answer that they had no planes with five-ton pay loads, and for the present had no money with which to build them. Again it was a question of equipment, and again the industry had to admit it was disorganized. After the 32-passenger Fokker, which could be modified as an express carrier to have approximately 8,000 pounds (four tons) pay load, the largest planes could offer only 3,870 pounds (Boeing), 3,775 pounds (Ford), and 3,430 pounds (Keystone-Loening).

Again the first step seemed to lead the aviation companies toward the railroads. Better than any group in the world, railroaders know how to discover traffic and to accommodate it.

Equipment

To return to the financial equation. One answer to the problem of meeting the dollar-a-mile operation cost is to raise rates; another is to carry more passengers. Fokker has just put into service the greatest passenger plane yet built in this country, seating thirty-two and sleeping sixteen. Even if the passenger rate remains at five cents, this ship, full, will bring in revenues of \$1.60 a mile. The Fokker is quoted at \$110,000 and depreciation charges (per mile) must be considerably higher than in the case of a Fokker tri-motored transport costing \$67,500. Where increased size (and hence increased traffic) ceases to be an advantage is a problem for keen and experienced engineers. The tri-motored plane consumes more fuel than the single-motored plane, and not all engineers are agreed that it is safer. Each transport company must figure its cost-per-mile down to a minimum, and in that figuring, the choice of equipment is vital.

Until now, manufacturers have built more upon the

Four Major Aviation Groups

AVIATION CORP.

Air Line Subsidiaries controlled through newly formed American Airways, Inc. (Partial list):

COLONIAL AIRWAYS CORP.—(Colonial Air Transport, New York-Boston; Colonial Western Airways, Albany-Cleveland, Buffalo-Toronto; Canadian Colonial Airways, New York-Montreal; Colonial Flying Service)

CUBAN AVIATION CORP.—(Servicio Cubano de Aviacion)

EMBRY-RIDDLE AVIATION CORP.—(Embry-Riddle Co., Chicago-Cincinnati)

INTERSTATE AIRLINES—(Chicago-Atlanta, St. Louis-Evansville)

SOUTHERN AIR TRANSPORT—(Gulf Air Lines, Atlanta-New Orleans-Houston; Texas Air Transport, Dallas-Galveston and Dallas-Brownsville; T.A.T. Flying Service, Dallas-El Paso, Dallas-Brownsville, and Dallas-Houston; T.A.T. Flying School; Southern Aeromotive Service; Dixie Motor Coach Corp.)

UNIVERSAL AVIATION CORP.—(Robertson Aircraft Corp., Chicago-St. Louis and St. Louis-Kansas City-Omaha; Continental Air Lines, Cleveland-Louisville; Northern Air Lines, Cleveland-Chicago-Kansas City-Garden City; Braniff Air Lines, Tulsa-Oklahoma City-Dallas; Central Airlines Co., Kansas City-Wichita and Wichita-Tulsa; Robertson Flying Service; Mid-Plane Sales & Transit Co.; Egyptian Airways Co.)

FAIRCHILD AVIATION CORP.—(Fairchild Airplane Mfg. Corp.; Kreider-Reisner Aircraft Co.; Fairchild Aerial Camera Corp.; Fairchild Aerial Survey; Fairchild Aircraft; Fairchild Engine Corp.)

AVIATION SHARES CORP.—(Aviation Patent & Research Corp.; New York Aviation Corp.)

ROOSEVELT FIELD, INC.

CURTISS-WRIGHT CORP.

Subsidiaries (Partial list):

CURTISS AEROPLANE & MOTOR CO.

CURTISS AEROPLANE EXPORT CORP.

CURTISS-ROBERTSON AIRPLANE MFG. CO.

CURTISS AIRPORTS CORP.

WRIGHT AERONAUTICAL CORP.

MOTH AIRCRAFT CORP.

TRAVEL AIR CO.

CURTISS-WRIGHT FLYING SERVICE

CURTISS-CAPRONI CORP.

REED PROPELLER

COMPANY

KEYSTONE-LOENING

AERONAUTICAL CORP.

NEW YORK AIR TERMINALS

NEW YORK AND SUBURBAN

AIRLINES

Affiliates:

CURTISS REID AIRCRAFT CO.

CURTISS ASSETS CORP.

AVIATION EXPLORATION

COMPANIA NACIONAL CUBANA

DE AVIACION CURTISS

NORTH AMERICAN AVIATION—(Eastern Air Transport Inc.; Miami-New York mail route; Sperry Gyroscope Co.; Ford Instrument Company)

NATIONAL AVIATION CORP.—(Aeronautical Industries, Inc.)

TRANSCONTINENTAL AIR TRANSPORT-MADDUX (across continent by air and rail; Los Angeles-San Francisco, Los Angeles-Phoenix, and Southern California)

NATIONAL AIR TRANSPORT—(Dallas-Chicago and Chicago-New York)

UNITED AIRCRAFT & TRANSPORT CORP.

Subsidiaries:

PRATT & WHITNEY AIRCRAFT CORP.

BOEING AIRPLANE CO.

BOEING AIR TRANSPORT

PACIFIC AIR TRANSPORT

CHANCE VUGHT CORP.

UNITED AIRCRAFT EXPORTS.

STANDARD STEEL

PROPELLER CORP.

STEARMAN AIRCRAFT CO.

SIKORSKY AVIATION CORP.

STOUT AIR SERVICES

NORTHROP AIRCRAFT CORP.

DETROIT AIRCRAFT CORP.

Subsidiaries:

AIRCRAFT DEVELOPMENT CORP.

RYAN AIRCRAFT CORP.

AIRCRAFT PARTS CO.

GROSSE ILE AIRPORT

MARINE AIRCRAFT CORP.

DETROIT AIRCRAFT EXPORT CORP.

BLACKBURN AIRCRAFT CORP.

EASTMAN AIRCRAFT CO.

LOCKHEED AIRCRAFT CO.

PARKS AIR COLLEGE

GLIDERS, INC.

A supplementary list is printed on page 144.

strength of inspiration than with a clear eye to the industry's needs. Planes which are not safe to fly have been put on the market, have made their contribution to the record of crashes. This is more true of the small companies than of established and well-backed companies. A distinct exception is the Curtiss Aeroplane & Motor Company, Inc., which now has two hundred engineers on its pay roll and which is pressing, not so much toward current earnings, as toward an investment (in the form of new designs) which will pay returns four or five years hence.

From Curtiss, too, has come another contribution to the equipment problem, this time in relation to safety. While all aviation publicity men make much of the thought that *it is not more safety which is needed, but public acceptance of existing safety*, yet aviation engineers admit that there is much to be done in technical design. So vital did the Guggenheim Fund think this technical work that it offered a prize of \$100,000 for the plane which showed the greatest advance in adoption of safety devices. The Curtiss *Tanager* won the competition, with somewhat too much ease. And the engineers who planned it are now studying how to apply its principles (floating ailerons, wing slots, flaps, etc.) to planes built for commercial safety.

The Railroads

When Mr. John Maddux became president, last January, of T.A.T., the new régime was inaugurated by the dismissal of half a dozen high subordinates and their replacement by operating men from the Pennsylvania Railroad. The significance of this move escaped no director of his company and no railroader. It suggested that not only might aviation turn to the railroads for counsel, but that by a gradual process of acquisition and substitution the country's airplane service might become an integral part of the railroads. Blunt Daniel M. Sheaffer, then Pennsylvania's able vice president in charge of traffic, had foreshadowed the upheaval with a pregnant forecast for 1930. "Pennsylvania management," observed Mr. Sheaffer, "is keenly enthusiastic on the future of commercial aviation. Foundations have now been laid, and 1930 should be a year of substantial progress and traffic building. Great distances between boundaries of the United States . . . assure broad market for *well-planned and competently managed flying service. It will continue to develop as it has been initiated; primarily as auxiliary and supplementary service to that of the railroads.*"

This picture, however reassuring for the companies which have been losing money, is scarcely recognizable as the picture of 1927 or even of 1928. In place of a goggle-eyed, enthusiastic World-in-the-Air, we have a carefully selected portion of the world, using the air for a restricted and computed part of the time. The particular portion and the allotted time being under the control of another form of transport.

Such a complete recasting of the future of aviation is probably too radical for the industry to embrace. While the arms of the railroads offer what seems like warmth and safety, the price of entering them is too heavy to be paid all at once. Too many men must lose their jobs and their reputations; too many planes must be scrapped. Yet if the Pennsylvania succeeds with its rebuilding of T.A.T.-Maddux, if the New York Central makes Universal into a useful and integral part of its mighty system, if one or two others take over ailing lines and restore their health, a great impetus and a continuing temptation will face the industry. If aviation cannot make itself transport, why should the railroads not try? Profits and peace are, in the long run, more satisfying than the elusive World-in-the-Air.



TRAVEL AIR (see opposite page)

AMONG THE STIMULI WHICH THE U. S. AVIATION INDUSTRY DOES NOT USE TO ENCOURAGE TRAFFIC ARE SUCH VIGOROUS AND COLORFUL POSTERS AS THOSE REPRODUCED BELOW. THE POSTER IS A FAMILIAR EUROPEAN ACCOMPANIMENT OF TRAVEL, BOTH BY RAIL AND BY AIR. HIGHLY EFFECTIVE ABROAD, THIS ADVERTISING DEVICE MIGHT WELL BE ADOPTED HERE.





LOCKHEED SIRIUS

THE two blobs in the cockpits of the thoroughly streamlined, low-wing Lockheed *Sirius* monoplane above are the heads of the most idolized persons in aviation, Colonel and Mrs. Charles Augustus Lindbergh. Colonel Lindbergh gave his \$17,825 check for it, and then proceeded to test out its air-worthiness for the Lockheed Aircraft Corp., a subsidiary of Detroit Aircraft Corp. The Shell Aviation Corp. bought the second, to be flown by Captain John P. McCready of the western division. More generally useful Lockheeds are the *Vegas*, particularly the five- and seven-place cabin ships. They are the fastest commercial ships. William Gibbs McAdoo, President Woodrow Wilson's Secretary of the Treasury, owns one. When skipping across the country with it, he likes to have his pilot take it to its highest possible altitude and then zoom it swiftly down. At Kansas City, Dr. Walter M. Cross, consulting chemist, uses his Lockheed *Vega* for swift business trips. Captain Sir Hubert Wilkins used two Lockheed *Vegas* to explore in cold Antarctica two winters ago. When his season ended, he stored the planes in an iron-sheathed hangar which was soon snowed over. They were in good condition when he returned for further exploring last autumn. Perhaps the best known Lockheed *Vega* is that one owned by the Texas Corp. in which Captain Frank Hawks set his transcontinental record.

AT THE Cleveland Air Races last autumn a single-seater, low-winged, black-mounted monoplane, similar to but smaller than the Lockheed *Sirius*, whizzed around the course to win, at 194 m.p.h. It was the Travel Air Co.'s *Mystery S*, which can attain 240 m.p.h. when pressed. In 1922, when Travel Air's President Walter H. Beech was working for the Swallow Airplane Co. at Wichita, Kansas, he won the national efficiency race. Two years later he formed the Travel Air Co. with four other young men. Two of them, Clyde V. Cessna and Lloyd Stearman, now head their own companies, producing, like Travel Air, light planes for sport and business. The Travel Air Co. is closely affiliated with the Curtiss-Wright Co., so closely that it has been announced that Mr. Beech will be president of the Curtiss-Wright Sales Co., which markets the planes made by the manufacturing companies controlled by the main corporation. The plane which he is pushing hardest for his own company is the neat one shown on the opposite page. It has six seats including two for pilots. Hence transport companies use it to fill in the gaps between cities off their main lines (feeder services). Business men, for example President S. D. Black of the Black & Decker Mfg. Co. (fine tools), use Travel Airs to carry their high executives around sales territories, or have the ships fitted as offices for work en route. The price of this plane, \$13,005, is low enough to attract a large number of individual owners.



Bottled Time

The economic importance of Elgin's Mr. Urie, right or wrong.

TO THE watchmaker, time is a commodity extracted from the universe and bottled for domestic needs. The process consists of the mining of the raw material and the preparation of the containers. At Elgin the preparation of the containers requires 4,000 men, 68,000 machines and attachments, 7,000 kinds of bench tools, 211 parts, 3,773 operations, and nine months to a year and a half. The mining of the raw material requires one man, one transit, one push button, one revolving graph, and a few minutes a day. It is a matter-of-fact, straightforward, businesslike industry.

The only oddity about it is the fact that the commodity it so carefully extracts from the stars is almost certainly not there at all. Einstein plus Minkowski plus Eddington are convinced of that, adding, however, that its extraction and bottling are an essential trade to be by every means encouraged. Mr. Urie, astronomer of the Elgin National Watch Company, naturally holds a different opinion. He has seen it. To be exact he has seen it for years, two clear nights out of three, from the slit in the roof of his observatory on the hill above the company's works. And he has not only seen it; he has removed it from the night sky and piped it to the factory to be put up in brass.

Mr. Urie is undoubtedly misled. He is like the fisherman who scooped his shadow from the sea. He is a harvester of illusion. And it is altogether immaterial whether he is right or wrong, because the stuff he gathers is the prime necessity of our age. Without it, even granting that it is not there, communication over any distance, transportation of almost any kind, machine production to any considerable extent, complicated social relations and business transactions, the modern practice of medicine, and almost all forms of scientific experiment would be precisely impossible. As Minkowski would be the first to admit. For life, by the Proper-Time of the new physics, would be obliged to balance the advantage of theoretical perfection against the incredible inconvenience of never knowing when it was dinner time relatively to the cook.

Mr. Urie's respectability

Mr. Urie therefore remains a respectable and important person in spite of the doubtless visionary nature of his activities. But even so he is a curious figure. He stands at the eyepiece of his transit watching a grill of eleven spidery lines against the void meridian. A speck of light swings past—Polaris or some unnamed, intricately numbered star. The pressure of his finger on a button jogs the ink line of a turning graph. The graph is geared to a Riefler clock which, below him, upon a concrete pillar separate from the building itself, in a hermetically sealed glass jar, at a constant pressure and a constant temperature, records sidereal time. Each of the paralleled lines drawn by the recording pen upon the graph is one minute long. Each minute's length is scored sidewise in seconds. Seconds, on Mr. Urie's map, are half an inch in length. As his finger, obedient to the sliding star, presses the

electric button, the line of the recording pen wavers. It wavers again as the star crosses the next of the eleven marks and the third and the fourth and so on to the last. The average of the eleven marks is the point upon the clock's track at which the meridian of Elgin met the star observed. Mr. Urie turns to a volume entitled *The American Ephemeris and Nautical Almanac*. There the time at which the meridian of Elgin *actually* (i.e., astronomically) met the star in question is written down. The difference between that time and the time mark on the graph is the clock correction.

The moment Now

So, on a clear night, he watches the meridian past a dozen stars. From jog to jog of his push button the earth rolls over to the sky. This rolling of the earth is Mr. Urie's time. It is a kind of dead reckoning in which not the log chip at the line's end but the chip itself whirls round to count the miles. Like all dead reckoning, it shows no more than where we are in relation to what's behind us and what may be on ahead. From where to where is no concern of Mr. Urie's. His occupation is to find the moment Now.

But the moment Now upon the dial of the sidereal clock is a strange moment. Only once in the course of a year will it coincide with the Now we know. Dawn may fall at sunset by that clock and three in the morning happen in the afternoon. Sidereal time laps over sun time by one day in the year, for the earth, rotating on its axis as against the stars, wheels also once a year around the sun, compensating by that movement one rotation.

To make this raw time available in a world long accustomed to working by sunlight and sleeping by dark, it must obviously be stepped down to solar dimensions. But true solar time is impossible to a clock, for the true solar day contracts and expands during the year. Mr. Urie (and some hundreds of millions of his contemporaries) accordingly assumes an arbitrary mean solar day of twenty-four hours, reduces the star time of his sidereal clock to the terms assumed, and transfers it to a second master clock, upon a second column in a second case. This last is finished time. Neither the sun, nor the stars, nor Mr. Einstein recognizes it, but it stripes the earth in bands of fifteen degrees and variations of an hour from Greenwich round to Greenwich. It permits all the interlocking movements of civilization. And the horologists manufacture it out of points of light and mathematics. For a needy world.

At Elgin it is carried directly by wire to the factory at the bottom of the hill. There the hum of the adjusting rooms is tripped at abrupt and regular intervals by the click of a telegraphic key. The workmen at the chin-high jewelers' tables change the positions of the microscopic golden screws that weight the balance wheel. The brass-cogged movement turns more slowly, faster, till it catches the precise insistent beat. The watch moves with the electric signal, with the mean clock, the sidereal clock, the earth. And time is bottled.



ONE OF A SERIES OF STUDIES IN SCALE, TAKEN AT ELGIN BY MARGARET BOURKE-WHITE

BENEATH fifteen pairs of such hands the Elgin timepieces pass in unbroken line. This finisher and his fourteen colleagues are watchmakers of the old days. Each must be expert in every detail of the work, must be able to take the watch apart and rebuild it, must not retard the delivery of the completed, adjusted instrument at the end of its nine months to one year period of manufacture. At the peak of production they complete 4,000 timepieces a day, more than the combined production of all other American watch manufacturers. In 1929 the sale of these

units netted Elgin National Watch Company about \$2,000,000.

In the factories of Elgin, Hamilton, Waltham, the finishers turn out 2,000,000 watches, more or less, each year. In the record year 1925, it was more, with domestic production of timepieces valued at \$82,000,000, Swiss production at \$59,000,000, German at \$25,000,000. Since then, it has been rather less, foreign competition becoming keener. America remains, however, not only the largest producer of timepieces in the world, but by far the largest buyer. In addition

to absorbing 95 per cent of its own manufactures, it buys more foreign-made watches than any other nation.

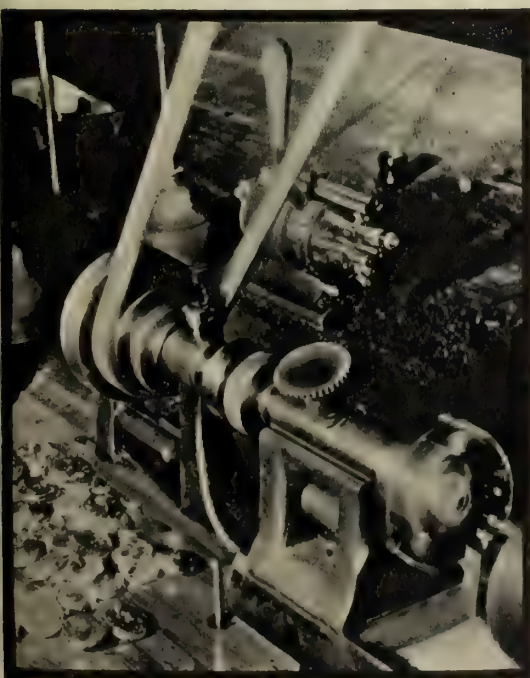
Like the sun's shadow itself, man's first chronometer, the tide of watches moves across land and water from east to west: German watches to England, Swiss watches to America, American watches to Canada and Australia, Japanese watches to China, the flow constantly regulated by human mechanisms scarcely less delicate or less precise than the intricate mechanisms they produce.



NOT THE LEAST DELICATE OF OPERATIONS AT ELGIN IS THE FLECKING
OF WATCH HANDS WITH LUMINOUS ENAMEL PAINT



ELGIN'S COMPETITION IN PRECISION—WHIRRING DRILL V. HUMAN HANDS



THE development of the watch in the industrial age is purely a development of watchmaking machinery. Elgin, with 4,000 employees, produces 4,000 watches a day, and each watch is approximately a year in process. The price of an adequate timepiece has dropped from the equivalent of hundreds of dollars to a matter of ten or twelve. These are the ordinary effects of machine intervention. The machines themselves are too human to be anything but unique in their kind. They are none of them patented. They are all made at the factories, are trade secrets, and their inventors are as carefully guarded from the accidents of conversation as tribal magicians.

But watchmaking was too old and expert a craft to be taken over and transformed by power-driven tools as most other industries have been taken over, and the manual machines have done nothing to decrease the human importance of the workers. The fingers are still the final judges of the freedom of a turning point and the eyes

of the temper of a spring. The more exacting and monotonous the work, the greater is the delicacy and precision of the movements of the hands. The girls who set the hairsprings in the needle eyes of brass, their faces bowed above the magnifying glasses in the low green light, have the serious and quiet look of women sewing. There is no sign that this eight hour concentration upon the dimensions of the microscopic world is painful to them. The only physical evidence of the peculiar nature of their work is the care they give their hands. Most of the girls wear jewels (not watches only) on wrists and fingers, and pay elaborate attention to their hands.

In a motor car selling for \$3,000, the factory labor cost may be as low as \$180. In a watch retailing at \$100 and selling, at the factory, at \$50, there will be \$42 of factory labor cost. An automobile frame can be, and is, automatically assembled. The watch remains, in spite of the thousands of machines, a human product.

Big Ship

The North Atlantic trade, already over-tonnaged, now awaits more monsters. How they may clear small profits, but how they are essential, is told herein.

THE S.S. *Leviathan* is the biggest passenger ship afloat. She is not the longest ship, for the *Majestic* is eight feet longer. Nor the fastest ship, for the *Bremen* makes the crossing in ten hours less. Nor the newest ship, for the *Europa* made her maiden voyage March nineteenth. But measured by the yardstick of gross tonnage, the *Leviathan* is queen of the seas.

To support royalty is an expensive proposition, as most states will testify, and when a queen travels, the bills are high. A classic example of this was the visit of the Sheban lady to Solomon; a modern example the tour of Marie of Rumania. As Marie sailed from Cherbourg on the *Leviathan*, our analogy comes to a happy point. Before the huge ship left New York on the first lap of her round trip, the fixed, unavoidable expenses of the trip were already enormous. Had she sailed empty from New York, without a single letter, a single piece of freight, had Queen Marie been the only passenger to board her at Cherbourg, the cost would have been only slightly less. Nothing of the kind happened, of course, and the *Leviathan* made two normal crossings which cost the United States Lines about \$325,000, brought them in \$500,000, and left them with an operating profit for the voyage of over \$175,000.

This profit is normal for a big ship on an average crossing. It is not normal for the great eastbound (May 14-July 10) or westbound (July 20-Oct. 1) hegiras, when the profit may top \$500,000. Nor is it normal for the slack (Jan. 1-March 15) season, when any big ship is lucky to break even. But averaging the *Leviathan's* sixteen yearly round trips, the result approximates \$175,000. It piles up close to \$3,000,000 over a year's operations. These figures, detailed, appear on the accompanying fiscal chart of the *Leviathan*. They do not make clear the financial status of the United States Lines, which is a complicated subject in itself; no allocation is made to the *Leviathan* of such administrative expenses as advertising, taxes, overhead, etc., nor is the chart adjusted to include the interest on the investment or depreciation, which will be discussed later. The chart details the average operating receipts and expenditures of a big ship. Having spent \$20,000,000 to build such a ship, the owner may reasonably expect it to bring in, each year, \$3,000,000 more than it costs to operate.

Why the *Leviathan*?

Each year some forty thousand persons climb the gangplanks of the *Leviathan* and prepare to spend five days and six hours upon the Atlantic ocean. Very few of these travelers have any link with the traditional American boy who in the last century ran away to sea. They neither know nor care which way the wind is blowing; faced with an old sextant or a new fathometer, they would be wide-eyed and helpless. They did not board the *Leviathan* because they wanted to go down to the sea in ships. Rather they chose the *Leviathan* because, with good luck, they could pretend they were not on a ship at all, but comfortably and conveniently at home in Chicago, Denver, or Kansas City. Presently, having looked

at the stock quotations, attended mass, danced in the night club, watched the movies, played golf and tennis, eaten caviar and fresh asparagus, they would step off at Cherbourg or Southampton and see Europe.

If this brand of seafaring is somewhat less glamorous than the brand of our Yankee ancestors, it is infinitely more comfortable and ordered. The *Leviathan* has appealed to American patronage on many counts, all of them cleverly put forward and all of them twanging the business-as-usual string. "Stewards who talk your own language . . . American food under the American flag . . ." But the most compelling of all is the promise of comfort contained in the phrase, "World's

[Continued on page 94]

S. S. LEVIATHAN	
REVENUES (Per voyage)	
FARES: First class	\$260,700
Second class	59,500
Third and tourist	128,900
	<hr/>
MAIL (9,300 sacks)	\$449,100
FREIGHT (340 tons)	43,600
MISCELLANEOUS	14,000
	<hr/>
	\$512,300
OPERATING EXPENSES (Per voyage)	
WAGES: Deck department	\$ 5,000
Stewards department	28,000
Engineers department	14,000
Miscellaneous	2,000
	<hr/>
FUEL OIL	\$ 49,000
FOOD: Passengers	85,000
Crew	34,000
	<hr/>
	\$ 48,000
COMMISSIONS AND TAXES:	
Commissions	\$ 30,000
Rail fares	11,000
Port taxes, etc.	34,000
	<hr/>
	\$ 75,000
MAINTENANCE	38,000
SHIPS' STORES	17,500
OTHER CHARGES, (including insurance, laundry, etc.)	18,000
	<hr/>
	\$330,500
OPERATING PROFIT PER VOYAGE	\$181,800
OPERATING PROFIT PER YEAR	\$2,908,800



Great Britain Builds \$65,000,000 Docks at Southampton

AT SOUTHAMPTON, England, concrete arms, with elbows crooked, year by year welcome such ships as the huge *Leviathan* (shown above in the center of the picture). Now Southampton needs more arms to shelter more *Leviathans*. Therefore each day at Southampton may be seen a fleet of eight ships plowing seaward, towing many a heavy-laden barge. Arrived at its destination, each and every barge surprisingly dumps its burden into the sea. Many times will ships thus jettison their cargo, and when they have finished they will have made, at the bottom of the sea, a gigantic and entirely useless mud pie.

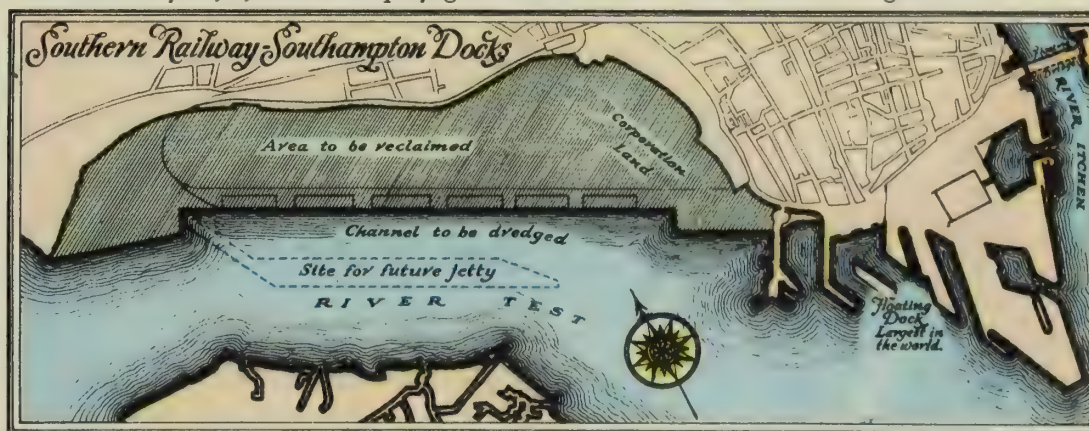
Here, too, spreads a three-mile network of pipes from especially equipped vessels over the mudlands of Southampton's river Test. From their gaping, thirty-inch mouths issues an unending spew of river-bed earth, firmer and more useful than the too soft mud towed out to sea. This mighty ejaculation, heaved from the river, pours upon mudlands, to reclaim four hundred acres to be added to Southampton docks and Southampton town.

Into the river are being lowered seventy-eight 7,875-ton monoliths of concrete. When the last

has sunk into its mud bank, Southampton will have a new quay wall for ships, a mile and a half long, capable of berthing eight *Leviathans*, holding back four hundred acres of new land from a new river channel forty-five feet deep.

Thus the \$65,000,000 Southampton dock project of the Southern Railway Company of England. In one year, 1,000 feet of quayage will be

added to the port's present 21,000. When at length the wall is finished, the sea jetty built, the warehouses, transit sheds, feeding roads, and railroads completed, Southampton will have seven miles of quays to handle passengers and cargoes of 3,500 ships a year. In the engineers' plan of the project (reproduced below), the existing docks are shown at the right.



largest ship . . . her 59,960 tons will make the blue Atlantic behave." And so they will. To the *Leviathan* passenger, the blue Atlantic is a pleasant and interesting background for the day's routined life. It is difficult to remember that there was a time when departing friends were fortified, not with pecan nuts and tangerines, but with the Holy Bible.

Guides to the Atlantic's behavior

Most basic of all the many reasons for this change, of course, is the substitution of oil for wind as motive power, the shift in scene from the rigging to the engine room. This was not accomplished without enormous expense. Wind is free, but it costs the *Leviathan* \$85,000 a voyage to keep her forty-six Yarrow boilers fed with their six thousand daily barrels of oil. Below decks on the ship are one-fourth of her crew of one thousand men, varying in importance from the chief engineer through his staff of forty-six trained, licensed engineers to the furnacemen who fit keys into little balls on the furnace doors and turn them until the flame is right, and from the furnacemen down to the lowly wipers. In the ship's social scale, the wiper is the engine room equivalent of the gob who scrubs the decks. He is largely responsible for the high rate of turnover in the engineers' department—about 30 per cent a round trip as against 15 per cent for the more staid, class-conscious stewards. Together with his engine room superiors, he accounts for a pay roll, per voyage, of \$14,000 and brings the total cost of driving the *Leviathan* across the ocean and back to about \$100,000. This is the blue Atlantic's most important—and most expensive—lesson in behavior.

Thus far the size of the *Leviathan's* bills appears to be unavoidable. Barring the discovery of a cheaper fuel, no amount of economizing will do much good. Above, in the kitchens and the dining room, the situation is different. The cost of rationing a man on a packet was figured, in 1838, at twenty-eight cents a day for a twenty-two-day crossing. Men's appetites have not changed much since then, and their stomachs are no larger. Why, then, the *Leviathan's* astonishing scale of food costs, ranging from the crew's average of eighty cents a day a man to the first class rate of five dollars or six dollars? Why the round trip bill of \$48,000?

The physical reason would be quickly apparent to anyone watching the deluge of food which pours into the ship in New York, the smaller deluges of Cherbourg and Southampton. The quantities are gargantuan. Consider these figures, selected at random, per voyage:

FISH	
Codfish	1,870 lbs.
Lobster	822 lbs.
POULTRY AND GAME	
Ducks	1,158 lbs.
Geese	1,525 lbs.
BUTTER	
Passengers	4,100 lbs.
Crew	2,000 lbs.
ICE CREAM	
Assorted	2,000 qts.
French vanilla	570 qts.
Biscuit tortoni	120 qts.

Chocolate	160 qts.
Strawberry.	60 qts.
Nesselrode	90 qts.
Tutti-frutti	40 qts.
Raspberry	40 qts.
Pistachio.	40 qts.
Coffee	50 qts.

TOTAL 3,170 qts.

NUTS	
Almonds.	335 lbs.
Brazil nuts	38 lbs.
Pecans	88 lbs.
MEATS	
Beef.	17,000 lbs.
Ham and bacon	8,000 lbs.
VEGETABLES	
Potatoes	40,000 lbs.
Cabbage.	3,500 lbs.
Lettuce	3,600 lbs.
Artichokes	900 lbs.
FRUITS	
Oranges	12,000 lbs.
Grapefruit.	7,000 lbs.
MISCELLANEOUS	
Coffee	3,623 lbs.
Gherkins, sour	12 bottles
Gherkins, sweet	20 bottles
Nabiscos	100 lbs.
Raspberry jam	60 tins
Pork sausage	1,100 lbs.
Sardines	500 tins

Already the answer begins to be clear. Not only did no packet ever stock 5,642,000 pounds of food a year, but there was no equivalent on its menu for *ten different kinds* of ice cream. And no packet ever carried such fabulous delicacies as caviar (175 pounds @ \$7.50 per pound); frogs' legs (60 dozen); calves' brains (60 pounds); quail (25 dozen @ \$5.00); woodcock (40 pair @ \$2.50); grouse (70 pair @ \$2.00); pheasants (55 pair @ \$1.95); partridges (97 pair @ \$1.35). Or such beguiling things as rose petals (1 box); crystalized violets (4 boxes); orange blossom leaves (1 box); *dragées* (1 pound); gum tragacanth (2 pounds). Or eels (50 pounds); ginger-snaps (60 pounds); *pâté de foie gras* (25 packages, 34 tins).

Here, obviously, is catering on an amazing scale. The *Leviathan's* passengers are not merely being nourished on their crossing; they are being teased, pampered, and gorged. Theoretically, this figure of \$48,000 could be slashed in half—cut down by three-fourths. Practically—and the operating chiefs of all the lines admit this regretfully—it can scarcely be slashed at all.

For such lavish providing is part of the business-as-usual program. If Queen Marie (or such equally noted *Leviathan* passengers as Mr. Owen D. Young, Ambassador Dawes, Chief Justice Hughes, General Pershing) should suddenly have an uncontrollable desire for an eel *en gelée*, it is the *Leviathan's* particular pride to be able to supply it. Hence the fifty pounds. Often they are not ordered, and as one cannot compel even a wiper to eat an eel against his will, they make up a part of the ship's constant, distressing, and inevitable waste. But the eels, too, play some subtle rôle in the business of making the blue Atlantic behave.

Cooks and stewards total five hundred in the slack season, seven hundred and fifty at the peak.

Theirs is the lion's share of the pay roll, some \$28,000 each trip. If this figure is added to the \$48,000 food bill and such minor items as \$4,000 for laundry, one can arrive at the cost of providing *Leviathan* passengers with bed and board. It adds up to \$85,000 or \$90,000 and brings the ship's bills close to \$200,000.

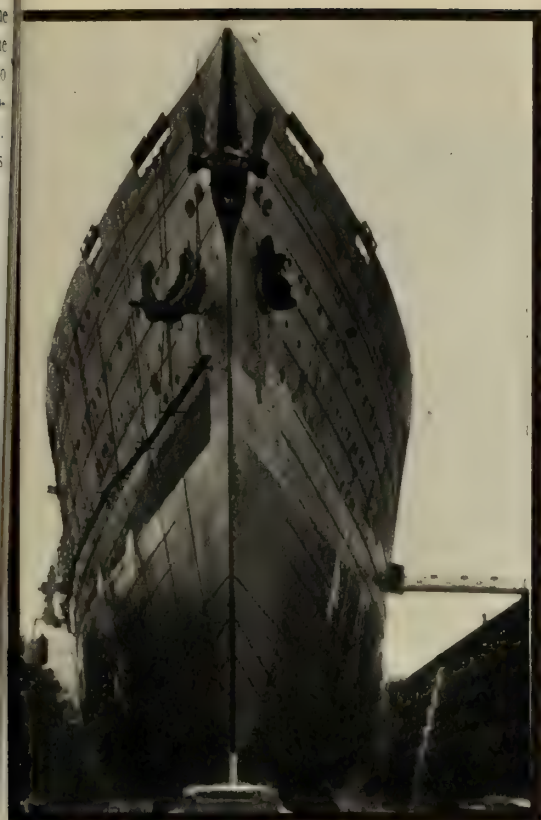
From this point on, costs are less easily classifiable and much less easily analyzed. Under "commissions and taxes" are detailed the agents' commissions, the various taxes fixed at foreign ports. (French invalids benefit by one hundred francs from each *de luxe* passenger who touches at Cherbourg, fifty francs from first class, thirty from second class, twenty from tourist class, and twelve from third class.) The maintenance charge of \$38,000 a trip is a rough allocation over the year of the large expenses of dry-docking and general repair. In the ship's stores at \$17,500 is included breakage, which is large, and theft. Expenses of the deck department are largely applicable to the ship's luxury budget, its games and its diversions. These are not enormous and, like the eels, they are necessary to the scheme of things of the modern big ship. If the scheme of things is good, then eels and the new Club *Leviathan* are wise.

The monster ship

When an English (or French or German) line plans a new ship, it is theoretically free to decide upon any size it pleases. An American ship, designed to be useful in wartime and hence able to pass through the Panama Canal, cannot have a beam (width) of more than 108 feet. As the public demands larger and larger ships, this at first appears to be a handicap, present or potential, which the American lines must face. Actually, the size of a ship is limited by many factors other than laws and naval conferences, most notably by the harbors it must enter. While England remakes Southampton (see page 93) and France remakes the harbor of Le Havre, no harbor is planned to allow the maneuvering of a ship of, say, half a mile in length. Thus many shipping men think the present big ships, about one thousand feet long, have reached the practical limits of size.

This is extremely important, as it bears upon the most capricious of the big ship's problems—the problem of obsolescence. When a ship in the North Atlantic trade is popularly out-of-date, it immediately becomes a total liability. It is far too big to be used in any other service, and without a good passenger list, it can be operated only at a tremendous loss. Thus each line strives to rejuvenate its monsters by every operation it can perform. Curiously enough, a ship's obsolescence is governed not so much by its physical condition (the life of a good hull is indefinite) as by its social status. The *Leviathan*, which is a pre-War ship, can plausibly date its physical life from its stripping and reconditioning in 1923. But its social youth needs such occasional hypodermics as the new night club, the talking movies, the ship-to-shore telephone. All lines were conscious of this need in 1926, when the modernistic *Ile de France* took the public's fancy, and distressingly conscious in 1929, when the *Bremen* sailed from New York with

[Continued on page 130]



Courtesy U. S. Lines



Fairchild Aerial Surveys, Inc.

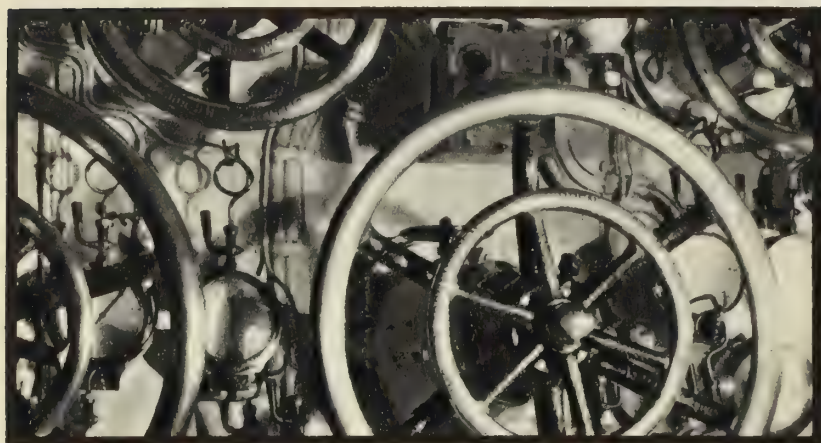
BOW AND STERN OF THE *LEVIATHAN*—THE BOW FROM HER DRY DOCK IN BOSTON, THE STERN FROM AN AIRPLANE FLYING ABOVE THE HUDSON RIVER



Fairchild Aerial Surveys, Inc.

THE *LEVIATHAN*, DOCKING, SHOWS 1,000 FEET TO BE NEAR THE PRACTICAL LIMIT OF LENGTH

Few Passengers See These Corners of the Modern Big Ship



Ralph Steiner

CONTROL BOARD—MAJESTIC



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CREW'S BREAD—MAJESTIC



PADDED CELL FOR INSANE—ILE DE FRANCE



NAVIGATION BRIDGE—ILE DE FRANCE



LINE OF LIFE BOATS
BREMEN



BOILER ROOM—ILE DE FRANCE



Frank Ehnjford
SMOKESTACK & WHISTLE
BREMEN

THUMBS DOWN

THIS PLEASES US MOST

**Of the pleasant things said
about us by our clients, we like
this best:**

**"Young & Rubicam do their
own rejecting. They think all
around an advertising plan or
an advertisement before they
present it for approval."**

**YOUNG & RUBICAM
INCORPORATED • ADVERTISING
NEW YORK • PHILADELPHIA**

**Serving the following clients: The Black Flag Com-
pany, The Borden Company, Edward G. Budd Manu-
facturing Co. and Budd Wheel Company, Columbia
Phonograph Company, Inc., Devoe & Raynolds Co.,
Inc., Fels & Co., General Foods Corporation, Inter-
national Silver Company, Johnson and Johnson, The
Norwich Pharmacal Company, Pennsylvania Grade
Crude Oil Association, Quaker State Oil Refining Co.,
Reo Motor Car Company, Rolls-Royce of America, Inc.,**

A. G. Spalding & Bros.



THUMBS UP

Is there a Jekyll-Hyde coming to work for you?

By and large, of course, it's a pretty honest old world that goes to work every morning. But there's a dual personality in most of us. Sometimes, it's a *good* and a *better self*. Sometimes, a *good* and a *weaker self*. Why wait then to bond your employees until, under stress, somebody makes off with the "cash box"?

Ætna Fidelity Bonds are more than "common-sense" protection. They not only safeguard you against loss but they exert a *moral* influence on your employees, helping them to withstand temptation. More and more it is the practice to bond "trusted" employees. All "trusted" employees

are not *trustworthy*. Those who are, welcome a Fidelity Bond as a sign that all's well.

Ætna writes practically every form of Insurance and Fidelity and Surety Bonds. Protection *all ways—always*. Ætna Service reaches from coast to coast through 20,000 agents. The Ætna agent in your community is a man worth knowing. Look him up!

The Ætna Life Group consists of the Ætna Life Insurance Company ~ The Ætna Casualty & Surety Company ~ The Automobile Insurance Company ~ The Standard Fire Insurance Company of Hartford, Conn.



ÆTNA-IZE

SEE THE ÆTNA-IZER IN YOUR COMMUNITY—HE IS A MAN WORTH KNOWING

FORBELL

Faces of the Month

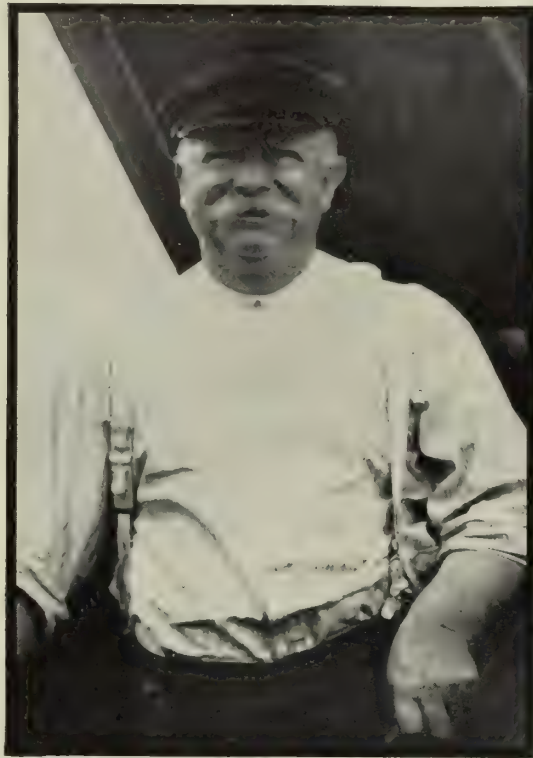


U. & U.

An outstanding automobile executive, John North Willys, has been appointed Ambassador to Poland. Founder and present Chairman of the Willys-Overland Company, Mr. Willys is known as an automotive sales expert. His appointment is significant in view of the Polish loan projected for flotation over here. On this, as on many other matters, Ambassador Willys will confer at length with the American financial adviser to Poland, Charles Schuveltdt Dewey (below). When Mr. Dewey came back to Warsaw after his recent trip to America, he found the country in a state of great business depression. Polish reporters flocked to him, eagerly asked his views. Cheery Mr. Dewey reassured his charges: "I see no reason for undue pessimism. . . . It is not so bad in Poland, I assure you."

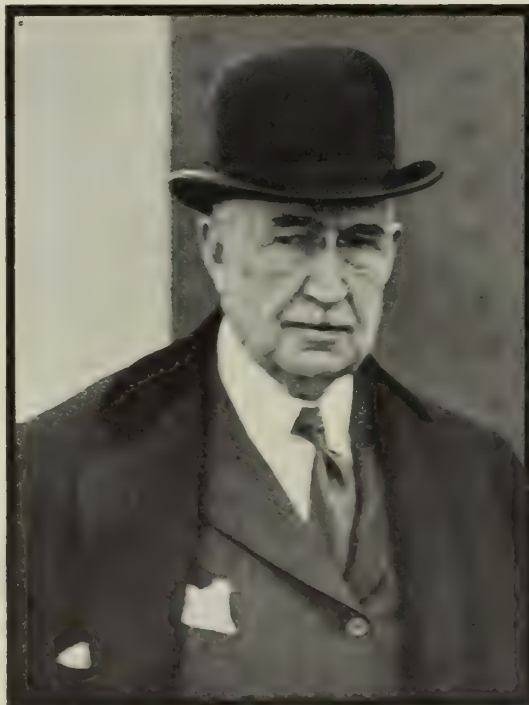


Keystone



Keystone

On the floor of Long Island Sound, near Hell Gate, lies a Revolutionary pay ship loaded with \$4,000,000 in British gold. At least, so believes Simon Lake, "father of submarines," who has invented, designed, and built many a submarine for the United States. His search begins this summer. "If it's there, I'll find it," declares Simon Lake.



Camerasgrams

The Bank for International Settlements has elected as a director Gates W. McGarrah, until recently chairman of the Federal Reserve Bank of New York. He will probably be elected president of the international bank.



P. & A.

Not long ago some workmen pried off a number "2" from a house in East Sixty-Seventh Street, New York, and replaced it with a number "4." This apparently trivial action greatly annoyed the owner of the house, ex-Governor Miller of New York, and greatly pleased Michael E. Paterno (above), builder of many a Manhattan apartment house. It meant that Mr. Paterno had won his long legal battle with Mr. Miller over the right to use the number "2" on his new apartment house next door to Mr. Miller's house.



Internationals

Russian industry will outstrip ours in fifteen years, believes William Z. Foster, "the brains of the U. S. Communist Party." His reason: The Soviet is not handicapped by such "capitalistic disadvantages as rent, interest on capital . . ."



International

Chicago's government ignored the city's business men until the financial crash came. Not so Detroit, mother of automobiles. The municipal purse strings are in the hands of an impressive Budget Committee. Left to right the members are Charles T. Fisher (see page 68), Clyde Burroughs of the Detroit Museum of Art, Edsel Ford, and Mayor Charles Bowles.



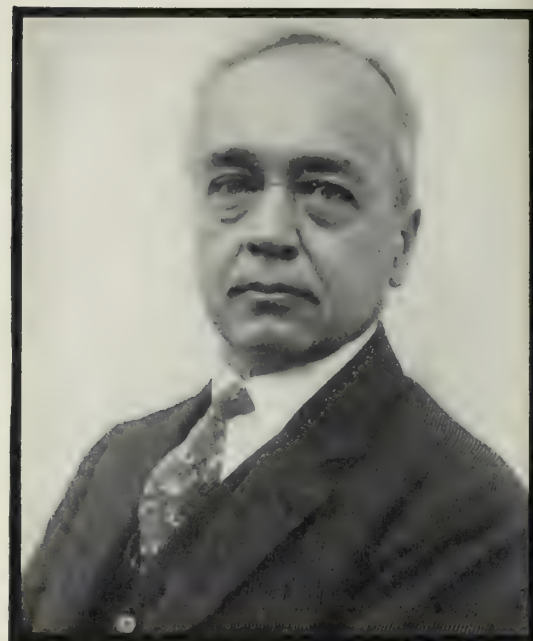
International

At the head of his Haitian commission, President Hoover has placed one of his ablest pro-consuls: W. Cameron Forbes, senior partner of Boston's old mercantile house, J. M. Forbes & Co. Mr. Forbes spent nine years in the Philippines, which included four years as Governor-General (1909-1913). When he is at home, Mr. Forbes holds patriarchal sway over the Forbes family on Naushon Island, Massachusetts. The Haitians have received the Forbes Commission with respect and even enthusiasm.



International

Edward F. Hutton is wearing stripes of his own free will. None the less, Grover Whalen, New York City's high-powered police commissioner, is the man responsible for his misfortune. The Commissioner's baseball team, the "Cops," conquered Mr. Hutton's "Convicts" in a game played at Palm Beach not long ago. The score was 8 to 3. Commissioner Whalen caught for the "Cops," bruised his fingers, batted .500. Mr. Hutton donned a mask and caught for the "Convicts." His batting average is not revealed.

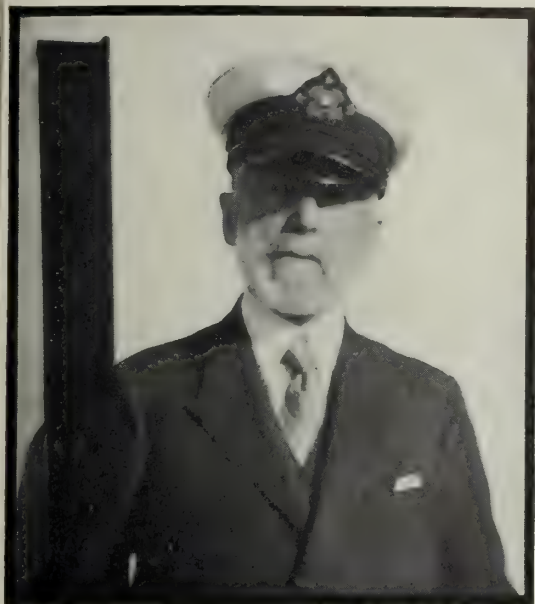


U. & U.

Gold in the Orient. On February 1, 1930, the Chinese Government began collecting import duties in gold—a step toward a gold standard. Immediate cause: the collapse of silver prices. Basic cause: the report of a commission headed by Professor Edwin Walter Kemmerer, of Princeton (above), advocating a gold standard. Below is Japanese Minister of Finance Inouye signing, or rather painting, a state order: "Lift the embargo on gold exportation." The raising of the embargo, in force since 1917, means that Japan has returned to the gold standard, and, more important, that her fiscal condition is once more flourishing.



Wide World



U. & U.

Cyrus Hermann Kotzschmar Curtis, publisher of the country's most favored advertising medium, the *Saturday Evening Post*, has received the country's leading advertising award: the Harvard Business School Gold Medal.



Cameragrams

Manuscript coup of the month, and of many months, was the purchase from the Royal Institution by Dr. A. S. W. Rosenbach (Philadelphia) of the official records of the British Army during the Revolution. The sale displeases Ramsay MacDonald, pleases Dr. Rosenbach, who terms the deal the most important in his career.



Guggenheim Bros. consists quite literally of Guggenheim brothers: left to right, Simon, Daniel, Murry, Solomon. More noted as coppermen (Kennecott, American Smelting & Refining) than as bankers, the Guggenheims surprised financial Manhattan by appearing (in a statement by J. P. Morgan & Co.) as members of the famous Bankers' Pool of last October, along with National City, Bankers Trust, and the rest. Like the early Rothschilds, the brothers work in close coöperation, even to the point of sharing a single private office.



P. & A.



P. & A.

The British Astors have been buying and selling American real estate. *Sold*: Beaulieu, the Newport estate of the late William Waldorf Astor, founder of the British line, to Mrs. Grace Graham Vanderbilt. The purchase price was \$140,000 plus an undisclosed amount for the interests of the three British Astors: Major John Jacob Astor (right), Viscount Astor (left), husband of fiery Lady Nancy Astor, and Mrs. Pauline Spender-Clay, née Pauline Astor. They are the heirs of the William Waldorf Astor Estate. *Bought*: 8-12 East 34 Street, New York City, from the musical firm, C. H. Ditson & Co. The Estate already owns 2-6 East 34 Street and 341-347 Fifth Avenue. These holdings, once part of the old Astor farm, form a large and valuable corner plot on Fifth Avenue.

Faces of the Month



International

Carl Gray, Jr., son of the president of the Union Pacific, has been appointed general manager and first vice-president of the Chicago, St. Paul, Minneapolis and Omaha Ry. He started as a clerk five years ago. His good but unusual reason for not entering the Union Pacific was that his father was president.



Keystone

Few American bankers take dolls seriously. It is otherwise in Japan during the annual Doll Festival on March third. On this solemn occasion, Viscount Shibusawa (above, energetically speaking at a League of Nations rally), "the J. P. Morgan of Japan," was pressed into service. He presented copies of *Dolls of Friendship* to the Empress Dowager and to Princess Takamatsu. The books tell the story of some thousands of dolls that were exchanged between the children of America and the children of Japan during the Doll Festival of 1927. The benevolent Viscount, grand old man of Japanese business, made a good doll ambassador extraordinary to the Empress.



P. & A.

Reorganization of a company calls for quick-thinking lawyers. A key man in the confusion of the Fox companies is Robert Taylor Swaine, distinguished partner in the Manhattan law firm of Cravath, de Gersdorff, Swaine & Wood, and now chief counsel for the Bancamerica-Lehman-Dillon Read syndicate.



P. & A.

The youthful American Express Bank and Trust Company, sired by the Chase National Bank and dammed by the American Express Company, has a youthful president: Medley G. B. Whelpley. Born in Canada 37 years ago, Mr. Whelpley has been a Chase vice president since 1926. The bank he heads will open in April with a paid-in capital and surplus of \$15,000,000.



International

In blistering, sun-scorched Death Valley, Nevada, stands a \$2,000,000 mansion, a prodigious gesture of the prodigious "Death Valley Scotty". It is only half built because Scotty now finds himself dead broke. His mysterious "gold mine" has gone back on him.



U. & U.

Before the dazzled members of the House Patents Committee appeared Mary Evelyn ("Fiji") Bendelari, pretty, clever, determined, and twenty-seven. Her theme: that shoes are works of art and hence should be protected by copyright. This was indeed an inspiring theme to Fiji, whose many designs have included the Deauville sandal.



★ ★ ★ ★

The **FIRST**
NATIONAL BANK *of*
BOSTON

Every important NEW ENGLAND interest, and many of national and international scope, are brought together around a single council table in the directorate of THE FIRST NATIONAL BANK of BOSTON.

*Affiliated Institutions: Trust Service, OLD COLONY TRUST COMPANY
Investments, The FIRST NATIONAL OLD COLONY CORPORATION*

A Budget for a \$50,000 Income in New York

The high cost and necessity of artichokes and *sauce mousseline*. And how Incidentals forbid Olivia more than one new evening coat every other year.

I AM closer to thirty-five than to thirty. I am married, have a child, and as vice president of a commercial bank downtown earn \$20,000. Fortunately in my not too early youth I was given some securities to have and to pyramid. A few more came our way when I married Olivia some ten years ago (*ah, senectus*). The income of all these now totals another \$20,000. The rest, for I average \$50,000, comes from the market. Last year (I dodged the cataclysm) I made about \$55,000; this year I shall make less. I manage to spend it thus:

The apartment on Park Avenue (in the eighties and conveniently close to the 86th Street subway on Lexington) costs \$7,000, and that fortunately includes a room on the second floor for the child's nurse. Food, ice, milk, gas, light, telephone, and the laundry, the omnipresent laundry (we are five in the household), come to \$650 a month with little or no fluctuation. To this for furniture I add another \$50. By "furniture" I mean replacing the maid-broken plates from our Davis Collamore sets, repairing the leg of the table that Jimmy Du Val inadvertently but inevitably broke. Furniture this year may mount perilously. Olivia says that the dining room simply *must* be done over, and she wants it in silver as a background for those two Dulacs her uncle gave her. Well, the sitting room furniture and curtains can do another winter, but even without attending to them \$50 a month for such items is low. However, we can borrow from the \$650 for food and laundry, and the average of \$700 a month (\$8,400 a year) seems reasonable.

In all this you will notice that I have not accounted for a single new Ludwig biography, nor the renewal of a dozen magazines, nor for gin, vermouth, and the post-prandial Scotch. For books, magazines, tobacco, and liquor I allot \$150 a month. Item: a case of champagne costs just about that. Extra dry, it is also extra: the month we bought the twelve merry Veuves, this department cost \$300. Twenty-one hundred dollars, or thereabouts, a year then we expend on these necessary luxuries. We could cut it down measurably, I think, if we went on the wagon, which would be easy, and persuaded our friends to do likewise, which makes it impossible.

Servants—the very word sounds like a bell. The nurse has to be good, and the price of her starched cuffs and smattering of Adler psychology is \$125 a month. Olivia insists upon, and I certainly like, a good table. The poached eggs, *sauce mousseline* on hearts of artichoke, and the apricot soufflé that graced the particularly festive meal we had a week ago were prepared by—Olivia calls her an artist—and the price of her artistry is \$90. Our maid serves the table and makes the beds. She gets \$80. When we have several guests we call up our favorite employment agency and get an auxiliary maid whom we know and whom we can count upon not to spill the soup or forget the coffee spoons. But that is only an occasional \$10. The salaries of the regular servants total a yearly \$3,540. Add the apartment's \$7,000, its upkeep's \$8,400. The liquor and books, as we remarked before, come to \$2,100. Our total thus far, I notice, is \$21,040.

The theatre comes every year in New York with winter never far behind. The season lasts roughly from the middle of September to the middle of April and we all, of course, go. Unless you make a trip to Hoboken where, as the *New York World* noted, Christopher Morley recently discovered where the red begins, or venture to West Fourteenth Street where Miss Le Gallienne speaks only to Chekhov, we can find but few seats not stamped \$6.60. The Guild, not infrequently dull, costs less (\$33 for two season seats for six performances; \$40 if you go Saturdays). Olivia and I go Thursdays. Of course, we could save money by subscribing to four or maybe six

BUDGET FOR NEW YORK

EXPENSES (constant)	
Apartment's rent	\$ 7,000
Apartment's upkeep—food, light, heat, etc. (including upkeep of summer house when apartment is closed)	8,400
Servants' salaries	3,540
Books, liquor, and tobacco	2,100
Theatre and night clubs	1,400
	\$22,440
	\$22,440
Clothes—Hers	\$ 5,000
His	1,000
Child's	600
School	500
	\$ 7,100
	\$29,540
Doctor	\$ 1,000
Dentist	500
Life insurance	850
Jewels, etc., insurance	150
	\$ 2,500
	\$32,040
College club dues	\$ 50
Racquet club dues	250
Downtown club dues	50
Downtown club expenses (\$50 a month)	600
Other club expenses (\$25 a month)	300
	\$ 1,250
	\$33,290
Summer house	\$ 3,500
Car { Gas and oil \$2 a day for 5 months	\$300
Insurance	75
Winter storage (7 months) and troubles	410
	\$785
Summer club	600
Summer parties	300
	\$ 5,185
	\$38,475
EXPENSES (variable)	
Incidentals—Christmas, charity, trips, taxes, mothers-in-law, etc. (see text)	\$11,525
	\$50,000

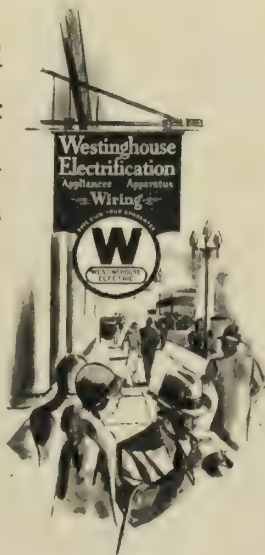
A RAINBOW

*now helps to make
Better Machines*

UP the hill to the busy Westinghouse research laboratories in East Pittsburgh come engineers of a great industry asking, "What shape shall we make these machine parts to get the greatest strength from our materials?"

Light flashes on a snow-white screen. Outlines of the machine part appear. Then someone turns a loading screw and areas of color are seen changing their hues as the load on the test model increases. Black turns to gray, gray to yellow, yellow to red, brown, green and so on. In this manner the machine part appears in colors of a laboratory rainbow that tells its own story for keen eyes to read—a well-directed ray of light discloses where the heaviest stresses are to be provided for.

"Photo-elastic tests" the engineers call them. And from tests like these, slight changes in shape give vast gains in strength without added material. Sometimes even less material actually gives greater strength. A laboratory rainbow does what the most elaborate calculations could not do.



These tests are but one instance of the methods by which Westinghouse research is engaged in finding new ways to help dollars in industry, in business, in homes, obtain larger returns for those who spend them. In finding and applying new facts, and in discovering new ways to use old facts for new gains, Westinghouse serves the modern electrical age in which you live.

ELECTRIC POWER BUILDS BUYING POWER

Westinghouse

season tickets and inviting our friends to Guild plays instead of to the more expensive ones. But nearly everyone does the Guild on his own. We'd undoubtedly be stuck with extra tickets, and too much *Red Rust* and Shaw is not good for the servants. Accordingly, when we invite Jimmy and Elise and the Johnny Moultries, theatre tickets cost approximately \$55. And since Elise likes to dance—and I might say so does Olivia—we go to the Lido or the Embassy. The Lido's Maraschino will present us with a check for another \$50. At the Embassy it is cheaper, but it costs us \$150 to join. Such fiestas are fortunately rare. But theatres and night clubs make monthly inroads of circa \$200 during the seven-month season, and lay claim to \$1,400. Adding everything together we arrive at a total, at this point, of \$22,440.

Oh, yes, I go to the office in the morning, and most nights I stay home. But somehow when one thinks of Manhattan expenses, one's mind turns dolefully to such as the above listed. And now—since sooner or later we must—let us consider the couturier, the doctor, the insurance agent, the high price of shoes.

For Olivia's clothes we budget \$5,000, which generally must be stretched, and which seems to allow her only one new evening coat every other year. For my clothes I allow a yearly \$1,000. Few men, I think, spend much more than \$10,000 for clothes in ten years. The child's frocks and frills cost about \$600. And since I have just mentioned the child (who is nine), may I here say that her tuition in a good private school is \$500. In a few years it will be more. Clothes do not break the man, but when they do not cost \$7,000 or more they cost \$6,600, which is the sum we herewith budget. I add the \$500 which it costs to deck the child's mind and reach a new high total of \$29,540.

I dare not allow less than \$1,000 for the doctor and \$500 for the dentist. That I believe not overcautious. Also I am insured in Olivia's favor for \$50,000. I took out a \$10,000 policy when I was twenty-one, and a \$40,000 policy at thirty. For the two of them I now pay about \$850, but dividends will gradually decrease this. Insurance on jewels and a few *bibelots* Olivia likes costs approximately \$150. In other words, I pay \$2,500 a year to insure my possessions and health and to take, in Olivia's name, an economic fling at death.

Let us for a moment consider city clubs, and our city expenses in large part are over. Olivia's mother, as a wedding present, promised to pay all her dues and bills at the Colony so that's out. I belong to my college club, where the dues are only \$50 and to the Racquet—\$250. But my expenses at both average no more than \$25 a month: an occasional game of squash, a cocktail, an occasional dinner. My lunch club downtown presents bills that average \$50 a month; its dues are \$50 a year. I recapitulate and total: all the doctors and all the insurance men get \$2,500; the stewards and the club treasurers get \$1,250; I add what *Variety* might call the resultant three and three quarter grands—of my assured \$40,000 (remember that \$10,000 or so is supposed to come from the market) I have taken \$33,290.

When spring is icumen in we must think of where Olivia can go where she will not be bored

to death, and where the kid can go where she will not die from city heat and carbon monoxide. We could rent a house on Long Island but if they are nice, they are high. Rye or Greenwich answers the purpose admirably. Olivia has friends there, I can commute, the child can swim at Manursing Island, and the apartment—with or without the silver dining room—can be closed. We rent a house for \$3,500 (we have never decided to build or buy because we haven't got the money and anyway we are not sure where we want to go), take the servants, and out we go. Our upkeep fortunately does not rise with the thermometer; neither, however, does it drop. The car comes out of storage (\$40 a month in the city), and Olivia is prepared to meet my train and bounce about the countryside, spending, I should say, \$2 a day for gas and oil. In the city we rarely use it, except in the fall for football games, to which annually we swear we will never drive again. The insurance of that automobile, I might add, is \$75. Its tires, its summer baths, its minor troubles (rather arbitrarily) \$130.

Of course, during the summer, we have to go to parties somewhere on the Boston Post Road and occasionally take a table or so at Canoe Place Inn. We bring our own refreshments and if (when we are visiting on Long Island) Olivia can be persuaded not to risk what she calls a modest sum somewhere in Montauk, the price of the summer's Saturnalia is not much more than \$300. In addition we have to join the club. The dues are \$100, and during the five months that we use it, we spend about \$500.

To carry on the addition which we left at the first signs of spring: the care of the car calls for \$785; the summer house, \$3,500; the summer club, \$600; the summer parties, \$300. All this (I have added and you need not bother) makes for \$5,185. And (I wonder if the child could do this sum?) $\$33,290 + \$5,185 = \$38,475$.

Thus of that aforementioned \$40,000 assured, we spend \$38,475 which, if the worse came to the purse, would leave us a \$1,500 or so to start the new year with the silver dining room and the sitting room furniture that can do for another year. But comes another item, evasive to budget, which creeps upon us unaware and is ever present, which for want of a better name—oh, badly, for want of a better name—I call incidentals.

Caviar to the mother-in-law

Incidentals, ladies and gentlemen, are Christmas presents, Easter flowers (I like not organized holidays), wedding presents, anniversary presents, flowers now and again but oftener again. Incidentals are caviar to the mother-in-law who goes to Europe, charity, petty cash, my two weeks' vacation (if I don't spend it at the summer place), various fall week-end trips, the silver fox that couldn't wait for Christmas, taxis at rates that please Police Commissioner Whalen. I have heard from afar off the rumor that a next year incidental may be a mink coat, which could not very easily come out of Olivia's \$5,000 for clothes. Perhaps the coat may suffer a sea-change into a short trip to Europe. Trips to Europe may sound expensive and therefore,

I suppose, important. I repeat—they are incidentals. And man, I know, is also a taxpayer."

My taxes come to about \$4,000. I have never been quite sure how they reach that figure, but a friend of mine at the bank assures me yearly that the Government and the State are not getting the best of me. In fact, he often adds—but why should Government or State read about that?

As I did to my dentist, my bootlegger, to the ceiling over my head, I do not to incidentals assign a definite figure in my budget. No act of volition is this. I cannot. The \$10,000 or \$15,000 which puts my income at \$50,000 is a variable. When the bank and trade winds are favorable, I pay more for incidentals; when they are ill-willed, I pay less. Our \$40,000 very nicely takes care of our New York necessities. The rest must do (indulge the phrase) for our necessary niceties. We buy no pearls when we cannot afford them, and there are other coats than mink. But the incidentals always claim virtually the entire amount above the \$40,000. There is little reason, unless sumptuously we build a yacht, why incidentals should ever cost more than \$10,000 or \$15,000. When and if I make \$75,000, I shall, therefore, save. If I make \$300,000—why, I shall yacht. Excuse such optimism, but we predicated frankness.

Now all this budgeting, if it seems extravagant, is nevertheless based on a few fairly sound presuppositions. Without discredit of conceit, I admit that I have confidence in myself. In other words, I believe that this my income at "closer to thirty-five than thirty" will increase. Unless that increase is very large, my present living expenses, insuring as they do a reasonable amount of comfort and pleasure, need not increase with it. Therefore, the expected increment to my earnings will be relegated to pure saving. In my old age I shall have enough tobacco for the pipes which I shall smoke with my books and a few choice friends. And, Olivia, sir, will have enough money to purchase the best wool for her knitting if this be the way age affects her. Also, of course, the pure saving will facilitate the destiny of the kid—or kids.

I admit that just because many of the people I see downtown, on Long Island, or about the city are richer than I is not reason enough *per se* for me to do the same things they do, and, therefore, spend approximately the same amount of money. But, you will admit, that with the present-day habit of mingling business and social affairs, it is fairly sound business sense to be with these people. As a member of the bank, I can thus profit the bank. And, as an individual, I add that I enjoy their company. If I did not—but that is somebody else's story and budget. The best things in life are not free, but they are always around. Even though today I do not save, I find sufficient reasons, social, business, personal, to justify my sharing in these things at this time.

Of course, it sometimes depresses to think that this income, which once seemed a very considerable sum, should be spent so easily and with so little of it set aside. I observe the figure: \$50,000. Jurgen, I remember, remarked, "How one's women mount up." I, a budgeter, contemplate figures of different curves, but wonder too at their mounting.

Your city... a world port!

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Aware of the fact that aeronautical facilities of today are but forerunners of tomorrow's accomplishments, Austin has been contributing advanced ideas in the field of aviation for more than a decade. By virtue of a well-rounded service, this nation-wide organization has successfully carried through to completion airport projects, hangars and aircraft factories in 21 states and 37 cities from Coast to Coast.

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To those individuals and organizations with aviation programs, Austin offers sound counsel and advanced airport engineering ideas. A copy of the interesting booklet "Airports and Aviation Buildings"—3rd edition—as well as approximate costs and additional information, will be gladly furnished for your project, of any type or size, anywhere. Wire, phone or write the nearest Austin office.



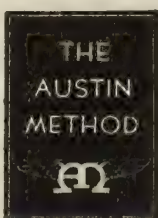
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New York City

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The William F. Wholey Co. Inc. (Equipment Specialists) 11 East 36 St. New York

Mr. Grigsby

Mr. Grunow

Mr. Grunow's finch must work for its dinner. Mr. Grigsby owns no bird.

On clear nights the stars in the heavens above Lake Geneva in Wisconsin shine on the estate which radio millions have bought for William Carl Grunow. On such nights William Carl Grunow and his friends sit upon the lawn and look up at the stars. In his factory Mr. Grunow is the explosive, profane driver, posting placards, "Don't Begin To Think You're Good," pushing production to above six thousand radio sets a day. At other times and other places Mr. Grunow is the debonair, handsome prince of fortune. But here on his clipped lawn Mr. Grunow turns his head up to the stars. In his philosophic evening hours, whenever he could find time from business, Mr. Grunow has been looking at the stars for years.

"Anybody who doesn't believe in God," he announces, "is a God-damned fool."

Bertram James Grigsby, slight, uncommunicative financier with a leathery face, deeply lined, and a bald dome of a head, leaves all ferment to his partner. In the Grigsby-Grunow Company he devotes himself to finances, and out of business there is his unpretentious home in Park Ridge near Chicago and in it once a week the regular game of the Park Ridge bridge foursome.

The game is in progress in a smoke-filled room. About the green table are Grigsby of radio, Spielman of yeast, Richtsteig of garters, and an advertising salesman named Petrie. The host is dealing, deftly, as he learned to deal while he was acquiring his poker face at the University of Illinois.

"Jim," says Petrie, grinning at Grigsby, "I hear you went rabbit hunting."

The deal slows down.

"Oh, I went out the other day."

"Did you get any rabbits?"

The dealing comes to a full stop. Mr. Grigsby grins, too.

"Well, no," he admits, "but I saw one. Just as I raised my gun to shoot him—they used to shoot rabbits when I was a boy in Cuba, Illinois, but this was the biggest rabbit I ever saw—well, just as I raised my gun to shoot, I slipped and fell into a swamp."

"A swamp?"

"Yes, a swamp. I gave up the idea of rabbit hunting. Come on. Let's play cards."

A nebulous plan is no doubt better than no plan at all. To that extent the Grigsby-Grunow combination was well off when it began in 1921 with \$37,500 capital and a determination to "manufacture something." What their product would be, they were unable to say until a vision came to Orville Quincy Hinds, in those days a

partner, while he and Grunow were riding on the back platform of a crowded Chicago street car. It was a sunny day. Hinds noticed an automobile equipped with a windshield sun-visor. The driver was trailing the street car undisturbed by the sun's glare although it shone directly upon the windshield.

"Why don't we make some of those?" he suggested.

"Say," shouted Grunow, "that's a great idea!"

Four partners in the business in 1925 all knew that business was bad. The difference between them was that two believed it would be worse, and two had faith that it would be better.

"We'll sell out," said Hinds and Grigsby's younger brother.

They were looking at a quarter million dollar debt with hardly anything to balance it in the assets column. It marked the culmination of consecutive misfortunes. The sun-visor business

had been destroyed when automobile manufacturers began putting out cars already equipped with them. That first catastrophe occurred at a time when they had on hand \$350,000 worth of a celluloidlike du Pont product called pyralin out of which they made the visors. All of it would have been high-piled junk but for the discovery that the newfangled radio horns could be made of pyralin. Then the new type of cone horn appeared and doomed their pyralin horn. They shifted to a battery eliminator for radio sets, but it was not yet perfect. Debts were accumulating.

"We'll sell out," said two partners, "for half what we put in."

The elder Grigsby and Grunow talked it over.

"We'll buy," they said.

In 1927 radio manufacturers began producing sets already equipped with eliminators. Grigsby went to one of the backers: "Unless we find something else to do, we'll be out of business January first."

At the long table of anxious faces, Grigsby turned their troubles into Grunow's dramatic hands. No tables in the Grunow business and social connection are covered with plate glass. He bangs with a hard fist.

"God damn it! Let's make radios ourselves. Put our own eliminators in them and sell the whole thing faster and cheaper than anyone else."

"Bill Grunow," said one of the backers, "you're crazy."

Seven days later Grunow and Grigsby showed their backers an operation radio set built in their own shops. From it came the Majestic Radio. Grunow flung the Majestic Radio at the world. It had no squeaking past to damn it as did the new models of the old firms. It was a good radio, new, cheap. He advertised. He inaugurated the Majestic Theatre of the Air over the Columbia broadcasting system in the fall of 1928. He spent thousands on the programs. For him Ring Lardner wrote a play exclusively for radio production. Edgar A. Guest wrote and read poems to Majestic Radio listeners. And Mr. Grunow signed Moran and Mack for twenty-six weeks at a salary of \$7,500 a week. That team is broken now, but in those days the Two Black Crows climbed to fame and pushed Majestic sales into thousands a day.

"Yeah, I don't blame you," the dusky voice drawled for Mr. Grunow. "It wasn't your fault. That was the devil in you knocked that man down."

"Yeah, the devil may have made me knock him down, but that jumping on him was my own idea."

[Continued on page 138]

The Plot

Than the enterprise of Mr. Grigsby and Mr. Grunow, none was more spectacular during the Golden Age of Coolidge. No product was so overnightly successful as their cheap, sonorous Majestic Radio. Here presented are a few lifelike sequences in the dramatic Grigsby-Grunow scenario.

Having produced a large share of the seven million radio sets to which Presidential Candidate Hoover called attention during his campaign, and more sets in 1929 than any other manufacturer, Mr. Grunow has named his 1930 models "Prosperity" in response to the President's general appeal for the same. Opportunist and Stentor, Mr. Grunow presses on though the radio business sags and his company's stock still wavers just above the price of the stock market crash. With dynamic drive, careless courage, profligate power, he whips, inspires, and energizes the men about and under him. He works them into neurasthenia, then sends them off for a convalescing holiday.

Now Mr. Grunow has announced June, 1930, as the date of his entrance into the well-established electric refrigeration business. Not that Mr. Grunow has invented anything or developed anything, but just as there was a demand for radios so Mr. Grunow sees a demand for electric refrigerators. It is enough.

The end of Reel I in the Grunowesque drama was the stock market crash. Whether Reel II will be worth shooting, whether Grigsby-Grunow stock will again excite speculative Chicagoans, is doubted by some. But never, never by Mr. Grunow.

Three opinions may be summarized:

The Trade's: "It can't be done."

The Distributor's: "We hope it can be done."

Mr. Grunow's: "The hell it can't! It can!"

Mr. Grigsby is also in the picture.



In the United States little boys who dream of imperialism are pictured as sons of Communists who wake up screaming after a nightmare in which President Hoover, riding on a pink elephant and aiming an imperialistic machine gun, mows down the entire Nicaraguan people.

But little English boys dream sweet, natural dreams of imperialism or rather of the dear old Empire. A new British film—produced in the spirit of *Peter Pan* by a company stodgily called British Instructional Films, Ltd.—shows a nice little boy, Master Douglas Beaumont, trudging in his sweater and shorts through the

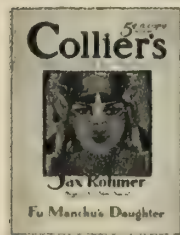
very nicest dream, a dream in which the background is Buckingham Palace, loaned for the first time by His Majesty to make possible the production.

Trudging at last into the Royal Kitchen, Master Douglas watches cooks pour sweetmeats from all parts of the Empire into George V's Christmas Pudding. Straightway the little boy sets out on the swift wings of dreams to visit all these places, and it is an arresting fact that to make the movie the thirteen-year-old hero actually did travel more than 20,000 miles. Aptly the imperial picture is called *One Family*.

BURLINGAME
PUBLIC
LIB

THE LARGEST MAGAZINE
CIRCULATION UNIT IN AMERICA

Now..
More than
8,500,000
circulation



A FEW MONTHS AGO we announced that the combined circulations of the five Crowell Magazines had passed eight million—the largest magazine circulation of any publishing house in America.

Today more than a half-million has been added to that total.

More important than the size of these figures is the Crowell editorial policy, which is responsible for this record circulation growth. For Crowell Publications are intimate,

helpful, and progressive. They suggest improvement, broader thinking, greater achievement.

To the manufacturers of modern products the increased demand for Crowell Magazines

is significant of an unsatisfied market for anything that will contribute to better living conditions, better health, or greater happiness.

The importance of the Crowell market is being recognized today by leading advertisers. Their orders already placed for space in 1930 issues exceed those for similar issues a year ago by more than two and a half million dollars.

WOMAN'S HOME COMPANION • THE AMERICAN MAGAZINE • COLLIER'S • THE COUNTRY HOME • THE MENTOR

Crowell
PUBLICATIONS

MORE THAN 8,500,000 CIRCULATION

Gillette's 800,000,000 Market

The shaver, like the artist, is never quite happy. But Gillette, doing its best, sells three times as many razors as its nearest competitor and last year netted \$13,581,683.41.

BY FAIRLY logical association, most people think of big business in terms of big things. The much-repeated phrase conjures images of locomotives, steel bridges, lumber, ships, shares, millions of shares. Yet most people will admit that it is possible to profit more in making a pencil than in building a skyscraper. Relatively and, in some cases, actually. Take, for instance, as small and intimate an object as a razor blade. Take the Gillette Safety Razor Company with its total net (since its founding in 1901 contemporaneously with U. S. Steel) of \$139,449,092. With its assets of \$57,000,000 and its 2,205,000 shares of common stock with an approximate market value of \$213,000,000. A business, furthermore, with an assured market because there are in the world 800,000,000 males with shavable beards. And Gillette has served only 115,000,000; and American Safety Razor (its closest competitor) only about 35,000,000. A business with an assured market because in the United States alone 2,500,000 youngsters come of shaving age yearly.

Speak not of Fords to the owner of a Chevrolet. Or of Chevrolets to the owner of a Ford. The difference between these two products may be largely temperamental, but the owner of the one or the other has the loyalty to his possession of a 1912 English suffragette to her cause. But even to your confirmed Gillette user, speak of a new razor like, perhaps, the De Haven Syn-crokeen (to sharpen the blade you merely jiggle the razor). He will try it. The shaver, one gathers, is like the artist. He always yearns for something better . . . his is always a slight disappointment in that which he achieves . . . he is never completely happy. It is an irony in the saga of Gillette or any other razor company that it makes its profit by mass-distributing slight matutinal disappointments. Meanin', as Trader Horn would have it, no offense.

But if shaving is perforce a nuisance, it is the ambition of Gillette to make it as little a nuisance as possible. Behold, therefore, in this year of grace 1930 (and in the year 29 of safety razor shaving) a new razor and a new blade. No more "razor pull," the advertisements tell you, no more wiping, no more rusting, a new finish for the steel blade. And the four corners of the blade are cut out, so that if you drop the razor and dent it you do not affect the tension on the blade and alter its delicate adjustment within the razor. Shrewdly the Gillette company so fashioned the new blade that it will fit the old-style razor. Thus customers who will not part with their old razors

may still use them. But the old blades do not fit the new razor. Anyhow, no more old blades are being manufactured.

This is what happened to the last old-style blade. It was manufactured on October 15, 1929. Its number was 5,318,436,976 (the number of the last old-style razor was 115,272,539, an average of forty-six blades to each razor). Mr. Frank J. Fahey, vice president and general manager of the company, took the five billion, three hundred and eighteen million, four hundred and thirty-six thousand, nine hundred and seventy-sixth blade, placed it in the very first Gillette razor, solemnly shaved himself, and pronounced the results excellent.

The American Safety Razor Company (Gem, Ever-Ready, Star) is also reported planning a new razor and blade. Perhaps we verge on a new shaving era. And painters will forget how to paint beards.

Largely humanitarian and social are Gillette's self-given reasons for their perfection of a new razor. But, emphatically, there was the question of patents. Most of the original Gillette patents expired in 1921. This gave other companies like Dunhill's, Probak, Darwin, an opportunity to make blades that fitted Gillette razors (it is, of course, on the sale of blades that one makes money). Gillette firmly protests that these incursive companies had no effect on Gillette's sale of blades. Largely, they think, because Gillette blades fit Gillette razors to the thousandth of an inch. Other blades, they believe, are not so finely adjusted. Nevertheless Gillette attorneys are anxious to return to the halcyon pre-1921 days when both blade and razor were protected by patent. Patents on these, therefore, have been applied for by Gillette. But here is a curious thing. Probak manufactures a blade that will fit the new Gillette razor. Probak, like Gillette, applied for a patent. And Probak has received it.

"It is called to our attention," said John E. Aldred, chairman of the board, on February seventh, "that during the past few days numerous rumors have been circulated, mainly in stock market circles, in regard to the Gillette company. These rumors are so contrary to facts as to appear to be a deliberate attack upon the company.

" . . . These rumors are mainly directed at the new razor and blade . . . it seems proper that your officers should state the facts . . . to the end

that shareholders may not be disturbed by any false statements.

"Production was entered into only after an exhaustive study convinced the management that it would constitute a long step forward . . .

"The development involves certain patents . . . Based upon the advice of our attorneys we are pleased to assure you that the patent situation, as well as that of manufacturing and sales, is being developed in a usual and orderly manner and that we anticipate no delay or difficulty in producing and distributing the new product."

The usual and orderly manner, however, involved even greater production than Gillette anticipated. Their entire 1930 output is already sold. During the last three months of 1929 Gillette curtailed production of the old-style product, cleared dealers' shelves to receive the new. But demand has been so great that the Gillette plant in Boston, according to its latest figures, is manufacturing 80,000 razors, 2,700,000 blades a day. And their days, of late, have been twenty hours long.

A Gillette blade *can* be honed, *can* be stropped. But by so doing you are apt to destroy the edge (the company manufactures approximately 132 miles of shaving edge a year). It is better to throw the blade away, they will tell you. Better for your face and, of course, better for the company's profit. Contrary views are heresy and anathema.

No one in the Gillette company will tell you what happens to the old blades. To mention the question shows you are an outsider. Tactfully, they will change the subject.

In March Gillette launched a \$10,000,000 advertising campaign, largest in its history. First indication of it was a five-page color advertisement in the *Saturday Evening Post* (circulation: 3,052,082) on March eighth. Followed five-page color advertisements in *Liberty* (2,269,586), *Collier's* (2,094,562), the *Literary Digest* (1,400,000), *Time* (300,000). Followed lesser advertisements in 53 magazines, in newspapers of 203 cities. Abroad, as usual, \$2,500,000 will be spent in advertising. But the foreign copy will advertise the old-style razors. It will be at least one year before Gillette is able to manufacture enough new razors to supply its foreign markets. Only the United States, Canada, and Cuba are receiving the new.

[Continued on page 132]

R O Y A L



M A S T E R



To install a set of Royal Masters and then forget them . . . to be free from even a hint of tire annoyance as long as they are in your service . . . to know they add beauty to the most princely car as well as security to your every trip—this is the joy of possessing Royal Masters. . . . For those whose means are equal to their inclinations and whose inclinations are for the best in tires, as in all things.

UNITED STATES RUBBER COMPANY
WORLD'S LARGEST PRODUCER OF RUBBER





FORGED OF ALCOA ALUMINUM

6 Specific examples of how to reduce weight ✓ retain strength ✓ ✓ ✓

These 6 examples, selected from hundreds of similar ones, are a quick picture of the wide spread application of Alcoa Aluminum Forgings in industry. They range from horse-shoes to airplane crank cases, nose pieces, propellers; from motor bus body side-posts to paint spray-gun handles.

In Alcoa Aluminum Forgings great strength is combined with extreme lightness. Although they weigh only $\frac{1}{3}$ as much as old-fashioned metals, when heat treated, they attain a tensile strength equal to that of mild steel—a minimum of 55,000 lbs. per square inch is guaranteed.

Nor are extreme lightness and great strength the only advantages to be secured through Forgings of Alcoa Aluminum. They do not rust. They are tough. They are easier and cheaper to machine. They take a high polish, a feature that often saves expensive plating.

Examine your product with Alcoa Aluminum Forgings in mind. Our nearest office would be glad to tell you whether your part could be supplied as a forging.

We recommend forgings where there is need for maximum lightness with maximum strength. But the light, strong Alloys of Alcoa Aluminum can be cast in sand, permanent molds or dies at a very low cost. ALUMINUM COMPANY of AMERICA; 2402 Oliver Building, PITTSBURGH, PENNSYLVANIA. Offices in 19 Principal American Cities.

ALCOA ALUMINUM



Transactions

Condensations and analyses beneath the headlines of the business news.

MORGAN STOCK POOL ENDS WITH A PROFIT

Who.—Banking group organized on October 24, 1929, with \$240,000,000 resources to assist in stabilizing the stock market: J. P. Morgan & Co. (Thomas W. Lamont), First National Bank (George F. Baker (r.)), National City Bank (Charles E. Mitchell), Guaranty Trust Co. (William Potter), Chase National Bank (Albert H. Wiggin), Bankers Trust Co. (Seward Prosser), and Guggenheim Bros. (Solomon R. Guggenheim) . . .

What.—Completed liquidation in open market of securities taken at time of the crash and came out "a little better than even." Amount of profit will depend upon the rates at which interest is figured on the something less than \$240,000,000 employed. Funds in excess of that amount were assured but never used . . .

Why.—Sale of securities bought at the bottom of the decline offset losses on stocks disposed of by the group at prices considerably below the prices it paid.

TWO ORIGINAL STANDARD OIL UNITS TO UNITE

Who.—Standard Oil Co. of New York (Socony) and Vacuum Oil Company (Gargoyle), original parts of the old Standard Oil Co. (New Jersey) before antitrust segregation of its units by the courts in 1911 . . .

What.—Directors of the two companies (1928 combined assets, \$882,249,828) agreed to combine in General Petroleum Corp. which would be second in oil in America only to Standard Oil Co. of New Jersey (1928 assets, \$1,572,267,610). The proposal to merge, however, will be withheld from stockholders pending the outcome of an announced Department of Justice

suit to test the legality of the proposed combine . . .

Why.—The two companies do not compete. At home, Standard of New York is chiefly interested in crude production, refining, and marketing of gasoline and kerosene, while Vacuum manufactures and markets high grade lubricating specialties. Abroad is the bulk of Vacuum's business; at home is the bulk of Standard's. Said Standard President Herbert L. Pratt: "The crude supply of the New York company and its refining facilities for gasoline and kerosene will tend to protect and extend the marketing outlets which the Vacuum Company has established for those products."

FROSTILLA GROUP BUYS POMPEIAN CO.

Who.—Syndicate composed of the four Shoemakers of the Frostilla ("Smooths, soothes and protects the skin") Company and Harold F. Ritchie, president of International Proprietaries, Ltd., (Eno's Fruit Salt, Thermogene) . . .

What.—Bought from the Colgate-Palmolive-Peet Company, the Pompeian Company, which manufactures the massage cream ("Clears the skin. Brings healthy color.") called Pompeian. Movie actresses years ago praised it from billboards.

GENERAL FOODS UNITS MERGED

Who.—General Foods Corp., which sells over \$100,000,000 of its products (Jell-O, Baker's Cocoa, Log Cabin Syrup, Postum, Maxwell House Coffee, Swan's Down Flour, Post Toasties) every year . . .

What.—Merged three big Boston wholesale packing and food distributing companies (Batchelder & Snyder Co., Arthur E. Dorr Co., and William A. Doe Co.), already owned by its subsidiary, Frosted Foods Products Co., Inc., into one organization to be known as Batchelder, Snyder, Dorr & Doe Co. . .

Why.—Companies merged, in ac-

cordance with General Foods' policy of welding its units together, will serve New England, Eastern New York, and the Atlantic coast states with perishables by the new Birds-eye quick freezing process acquired some months ago by the parent company.

24 TO JOIN CLAY PRODUCTS MERGER

Who.—Twenty-four manufacturers of vitrified products such as sewer pipes and power line conduits . . .

What.—Will merge as the Ceramic and Steel Products Co. to be formed in Delaware with \$30,000,000 capital, with plants in Ohio, Pennsylvania, Indiana, and Kentucky . . .

Why.—To standardize manufacture.

National Dairy, Kraft Phenix Wedding

Who.—The National Dairy Products Corp., the largest producer of ice cream in the United States, producer also of butter, milk sugar, milk powder, condensed milk, dried buttermilk, casein, and other milk by-products.

What.—Acquired the Kraft-Phenix Cheese Corporation and control of its subsidiary, the Southern Dairies, Inc., to form a consolidation with assets of more than \$240,000,000 to which Kraft-Phenix contributes \$50,000,000. . .

Why.—The Kraft-Phenix Cheese Corporation has been the subject of many merger reports in the last six months. At one time it was reported that it would be taken into Standard Brands, Inc., later that National City Bank interests were sponsoring a merger of Kraft-Phenix with the Colgate-Palmolive-Peet Company and the Hershey Chocolate Corp. Plans for this latter merger were interrupted by the market break.

THE ITALIAN BANKING MERGER

A SURPRISE ANNOUNCEMENT

Who.—The Banca Nazionale di Credito and the Credito Italiano, which, with the Banca di Roma and the Banca Commerciale Italiana, are Italy's "big four" banks . . .

What.—Merged to form one huge institution, though still not so big as the Banca Commerciale, Italy's largest banking house. The two units will continue under their old names: The merger was carried out under the active personal supervision of Mussolini.

Billion-Mark Merger of German Banks

Who.—Deutsche Union Bank of Berlin, controlled by Kreuger & Toll (Swedish match monopoly) . . .

What.—Merged the Preussische Pfandbriefbank (capital 25,000,000 reichsmarks) and the Central Boden Kredit A.G., (capital 18,000,000 reichsmarks), two of Germany's leading mortgage banking institutions, into a new bank with one billion reichsmarks (\$238,000,000) mortgage bonds outstanding. Name: the Preussische Central Boden Kredit and Pfandbriefbank.

DANZIG MONOPOLY TO SWEDISH MATCH

Who.—The Swedish Match Company (three out of four of all the world's matches burn for it) . . .

What.—Added a match monopoly in the Free City of Danzig to its long list of similar monopolies in Europe and South America by giving Danzig 1,000,000 Danzig gulden, equivalent to about \$194,500, certain additional future payments, and a loan of \$1,000,000 at 6 per cent. In like manner has the Swedish Match Company obtained most of its many European monopolies.



Brooks Brothers,
CLOTHING,
Gentlemen's Furnishing Goods,
**MADISON AVENUE COR. FORTY-FOURTH STREET
 NEW YORK**



© BROOKS BROTHERS

Cutaways, Silk Hats
 Striped Trousers
 for Easter
 Spring Weddings
 etc.

Send for "A Wardrobe for
 FORMAL DAY WEAR"

BRANCH STORES
BOSTON
NEWBURY CORNER OF BERKELEY STREET
NEWPORT PALM BEACH

Wheat Agency Buys to Curb Speculators

Who.—The Grain Stabilization Corporation, company recently incorporated in Delaware with Federal Farm Board backing, and the Farmer's National Grain Corporation, also Farm Board sponsored . . .

What.—Purchased between 6,000,000 and 12,000,000 bushels of May wheat futures in the open market during the recent collapse in wheat prices . . .

Why.—The Federal Farm Board had directed the National Corp. to buy wheat from coöperatives only at the preferential rate (ten to fifteen cents higher than Chicago Board of Trade quotations), and the Stabilization Corp. to buy "trader wheat" in the open market at the cash wheat price. This had the effect of "averaging down" the cost of the total wheat purchases and at the same time of taking May futures off the market so that the corporation would not be in the position later of having to pay higher cash prices for the grain delivered under these contracts.

PAN-AMERICAN LINE TO GET RIO AIR MAIL

Who.—Pan-American Grace Airways, Inc., joint subsidiary of Grace Steamship Co., and Pan-American Airways, Inc., which is in turn controlled by the Aviation Corporation of the Americas. Pan-American Grace planes fly from Miami to Cristobal, thence down the west coast to Santiago and over the Andes to Buenos Aires. Soon they will fly up the east coast from Buenos Aires to Montevideo and Rio de Janeiro . . .

What.—Will get the bulk of a supplemental Post Office Department budget estimate of \$1,500,000 for extending foreign air mail service in South America from Buenos Aires to Rio . . .

Why.—This is the question the recently inaugurated New York, Rio & Buenos Aires Lines, Inc., contending its lines are more di-

rect, will ask in its protest, probably through its Board Chairman, one-time Assistant Secretary of Commerce in Charge of Aeronautics, W. P. MacCracken Jr.

GOODYEAR TIRE CONTROL GOES TO C. S. EATON

Who.—Goodyear Tire & Rubber Company, the world's largest manufacturer of rubber . . .

What.—Passed into the hands of a group headed by the banking house of Otis & Company, whose chief partner is Cyrus S. Eaton of Cleveland. Analogous to the recent Otis Eaton merger of independent steel companies would be a consolidation, under the same auspices, of two more tire and rubber companies.

Why.—Since 1928, American rubber companies have seen the need of a closer organization of the industry. Their difficulties go back to November, 1922, when the British Empire, producing 67 per cent of the world's rubber supply, saw opportunity to establish world monopoly and fix world price at between thirty and forty cents a pound. For a time the Stevenson Restriction Act was as successful as Britons hoped it would be. Prices soared as high as \$1.21 a pound. American rubber manufacturers, alarmed, formed the American rubber pool and purchased vast stocks at prices ranging from thirty-five to forty-one cents a pound. Meantime Dutch and Javanese planters in the Dutch East Indies had been watching the prices. In 1927 they produced 225,000 tons of rubber, ending British monopoly control of world prices. Prices dropped in February, 1928, kept dropping to 17.2 cents in April. American tire companies took staggering losses on their inventories. Profits sagged into deficits.

More immediate troubles have been competitive—with mail order houses and each other. Many companies are building, or plan to build, chains of master service stations, supplying the motorist with gas, oil, tires, batteries, etc. Consolidations of tire companies into larger units would prevent competition from becoming ruinously expensive.

'SUCCESS in Overseas Selling...'



DR. JULIUS KLEIN
Assistant Secretary
of Commerce

SAYS DR. JULIUS KLEIN

"requires something more than daring and dominant will... precision of information is of paramount importance for every Merchant or Manufacturer, Banker or Shipper."

DR. KLEIN'S statement goes to the root of the selling problem here and abroad.

In the depression of 1920, to dispose of a temporary surplus, many American manufacturers sought foreign markets as an easy means for clearing their warehouses.

The farsighted manufacturer, however, looked at new markets overseas in the same way as he looked at new markets in America—as a field requiring for its development a merchandising strategy built on the solid basis of precise information, gathered through intimate familiarity with the habits and customs of the potential users of his product.

The J. Walter Thompson Company commenced, more than ten years ago, to build an organization which would give American manufacturers, in their penetration of foreign markets, the advantages of those same American merchandising methods which the J. Walter Thompson Company has applied so successfully in this country.

As a result of this planning years in advance, the J. Walter Thompson Company has a seasoned organization comprising 16 fully equipped main offices and 13 branch offices, assuring clients of a service in foreign fields which complements the service of the Company in the domestic market.



Unloading American products at ANTWERP. To speed their distribution the Antwerp Office of the J. Walter Thompson Company employs a staff of thirty-six people. Among them they command fifteen different languages spoken in the territory this office covers in its market research and advertising work.

Wherever new markets may lie, either at home or abroad, the J. Walter Thompson Company is in a position to locate them, appraise them in the order of their importance, and cultivate them with methods of proven efficiency.

An interesting pamphlet, entitled "Selling Abroad," which shows the scope of the foreign service of the J. Walter Thompson Company, will be gladly sent to executives interested. Write to the New York Office and a copy will be mailed to you promptly.

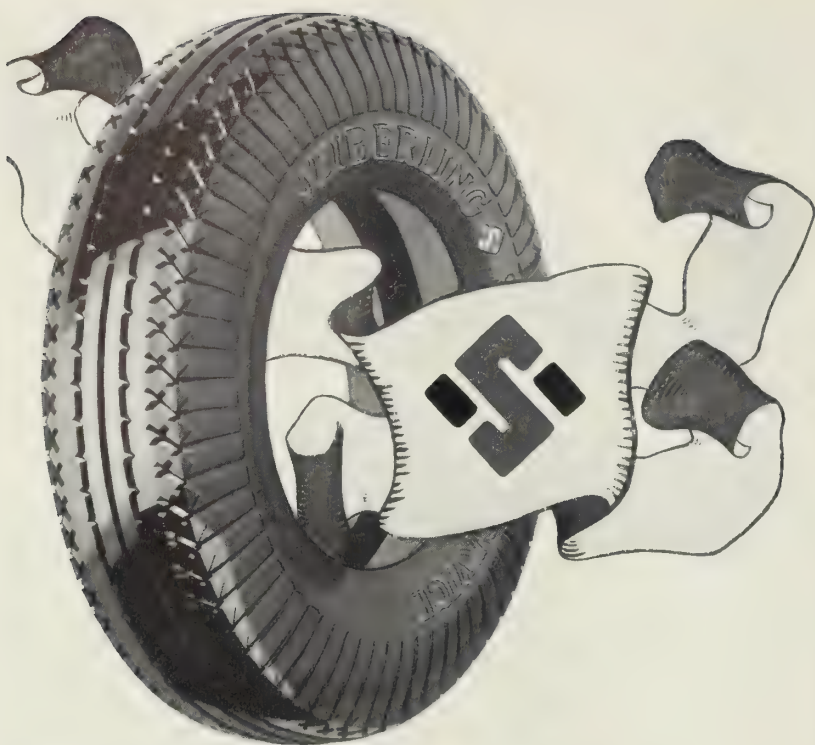
J. Walter Thompson Company

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Chicago, Boston, Cincinnati, San Francisco • Montreal, Canada • Paris, London, Madrid, Berlin, Stockholm, Copenhagen, Antwerp, Warsaw • Alexandria, Egypt; Port Elizabeth, South Africa • Buenos Aires, Argentina; Sao Paulo, Brazil • Bombay, India • Sydney, Australia,



Busy, efficient, HAMBURG is the chief trade portal to Germany. At Berlin is a J. Walter Thompson unit of 32 people. Recently, after a survey, they established an American product selling at a higher price than local competing products.



GREAT ALWAYS . . . GREATER NOW

For more than 30 years, the Seiberling name has signified unrelenting improvement, enterprise, invention—and always unchallenged integrity. Now, at the beginning of 1930, the sources of this generation-long renown are reflected more clearly than ever in the latest Seiberling product. . . . No less than six major advances, in manufacturing process, in selected raw materials, and in improved design, signally distinguish the new Seiberling Special Service Balloon Tire. From tread to bead, it is the exclusive quality result of Seiberling experience, progress, and ideals. . . . As such, it is not susceptible of comparison by any other tire standards. There is no like—but only contrast. . . . The Seiberling Rubber Company, Akron, Ohio.

Seiberling

Transactions

[Continued from page 116]

U. S. APPROVES BIG NORTHWEST RAIL MERGER

Who.—The Interstate Commerce Commission . . .

What.—Approved the unification of the Great Northern and Northern Pacific railroads, but refused to include the Chicago, Burlington & Quincy in the combination. A holding company, the Great Northern Pacific Railway Co., will take over control of the Northern. The Commission's decision reverses that of the Supreme Court in the famed Northern Securities case of 1901 . . .

Why.—The I. C. C. decision logically follows publication, last December, of the Final Plan for railroad consolidation, in which the Northern were united, the Burlington was divorced.

MERGER OF FIDELITY TRUST INTO MARINE MIDLAND ANNOUNCED

Who.—The Marine Midland Corporation, which owns 94 per cent of the stock in seventeen banks in New York State with resources of more than \$534,000,000 . . .

What.—Acquired Fidelity Trust Company of New York, total resources \$76,911,854 . . .

Why.—To have one member of its group of banks in Manhattan.

National Brands Formed Under Delaware Laws

Who.—National Brands, Inc., a new food holding company organized along the lines of Standard Brands, Inc., General Foods Corp., etc., with A. Victor Hughes (Crosby & Hill Co., Wilmington, Del.) as President . . .

What.—Bought the Quaker Products Company of Philadelphia (Quaker Oats) and planned to buy the American Dairies Company of Detroit.

Rossia Acquires 3 Germania Group Units

Who.—The Rossia Insurance Company, a reinsurance company organized in 1919 to succeed to the business of the United States branch of the Rossia Insurance Company of Petrograd . . .

What.—Acquired control of the Germania Insurance Company in 1922, the Germania General Life Insurance Company, and the Germania Accident and Third Party Insurance Company for approximately \$3,102,000. Recent cable from Frankfurt-on-Main stated that control of the Germania group said to be one of the largest insurance companies in Germany, was purchased from Jacob Michaelson, Paine, Webber & Co., of New York for the Globe Underwriters Exchange, Inc., of New York.

STONE & WEBSTER PLAN MERGER WITH LARGE UTILITY FIRM

Who.—Stone & Webster (Charles Augustus Stone, Edwin Sibley Webster), Inc. Utility enterprises and subsidiaries under its supervision serve more than 5,000,000 Americans, Canadians, West Indians with light and power . . .

What.—Proposed to acquire the Engineers Public Service Company (gross earnings 1929, \$50,494,852). Its lines and plants, already under Stone & Webster supervision, serve 2,300,000 people in 52 communities in 12 states, Southern Southwestern, Rocky Mountain and in the city of Ponce, Porto Rico . . .

Why.—Acquisition of Engineers Public Service may mark the beginning of a new plan of organization by Stone & Webster. In the future it will plan to control those affiliated and connected organizations in which it now has a minority interest.

THE BANK DISCOVERS A POWERFUL BUILDER OF GOOD-WILL •

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The Texas Corporation

[Continued from page 50]

yield and 48.3 per cent yield is a difference of $4\frac{1}{3}$ gallons of gasoline to every 42-gallon barrel of crude, a superiority in refining is one obvious reason for a superiority in net income. Despite the necessity of utilizing all the by-products of petroleum (and no company is more alive than the Texas Corporation to the importance of lubricants or the possibilities of natural gas), the petroleum refiner inevitably thinks first of petroleum in terms of gasoline and of efficient gasoline extraction as the cornerstone of his business.

"We followed reluctantly"

Mr. Holmes personally is conservative, determined, averse to publicity, and minus spectacular peculiarities or hobbies. Oilmen belong among those captains of industry who are still emphatically in the saddle and do not have much time to go in for sunken gardens or floating palaces. From a professional standpoint, Mr. Holmes is widely known as an outstanding conservationist. In March of the present year, following a price-cutting movement inaugurated by Standard companies, Mr. Holmes issued a statement giving his views on petroleum's perennial overproduction problem. Arguing that "we are in a period of chronic overproduction, quite different from overproduction situations we have had in the past where the oversupply brought about price conditions that discouraged new activities," Mr. Holmes estimated the crude stored above ground at more than 500,000,000 barrels with "shut-in production running as high as 1,200,000 barrels daily in the United States and 800,000 barrels in other countries." Texas and California were pointed out as the two states most responsible for overproduction, and the restricting of Texas and California output to their 1928 levels as the best method of correcting the oversupplied condition. But, added Mr. Holmes, "We were among the last of the large purchasing companies to meet the recent price reduction and followed reluctantly . . . We believe that the general spirit of coöperation within the industry that was and is followed by the producers should have influenced the principal purchasing companies to attempt to maintain crude prices until the coöperative movement had received every possible opportunity of succeeding." Thus,

independently, spoke the Texan independent.

Allegiance to itself

There is a story (not officially vouched for) that the Texas Corporation was once on the point of placing its advertising through an agency that is one of the largest in the country. Then, recalling its tradition of independence, Texas decided to remain with the relatively small agency that still efficiently advertises its Texaco products. Whether or not this story is true in fact, it is true in spirit. The Texas Corporation is independent in more than the technical sense of never having belonged to the Standard Oil group. In the neighboring Gulf company there is a tradition of family pride, a tradition to which the Mellons themselves subscribe so fully that they will drive blocks out of their way to get that "good Gulf oil." But Texas has an allegiance only to itself. The absence of a banking control and the diversification of stock has already been mentioned. Many petroleum prophets see the petroleum industry of tomorrow combined into a few great integrated systems, predict that only through many and far-reaching consolidations can the industry be stabilized. That there are too many producers is obvious enough, as is also the fact that the oil fields offer many merging opportunities. But if the industry does develop into a few great systems, it is safe to say that the Texas Corporation will be in a center and not on a circumference. It is impossible to visualize the Texas Corporation as entering any consolidation in which its independence and individuality would disappear.

During 1929 the Texas Corporation reached a net of \$48,318,072 compared to its 1928 net of \$45,073,879. Although in nearly every industry 1930 is expected to show an earnings' recession, it must be remembered that coal and steel are hardly more basic than petroleum. In the Texas Corporation's Manhattan office hangs a chart showing that the motors of privately owned automobiles constitute 70 per cent of "prime movers" (any source of horsepower including steam and electricity). As this comes close to 85 per cent with the addition of busses, gasoline engines, and other users of gasoline, it will be seen that the industrial age moves largely under petroleum's power.

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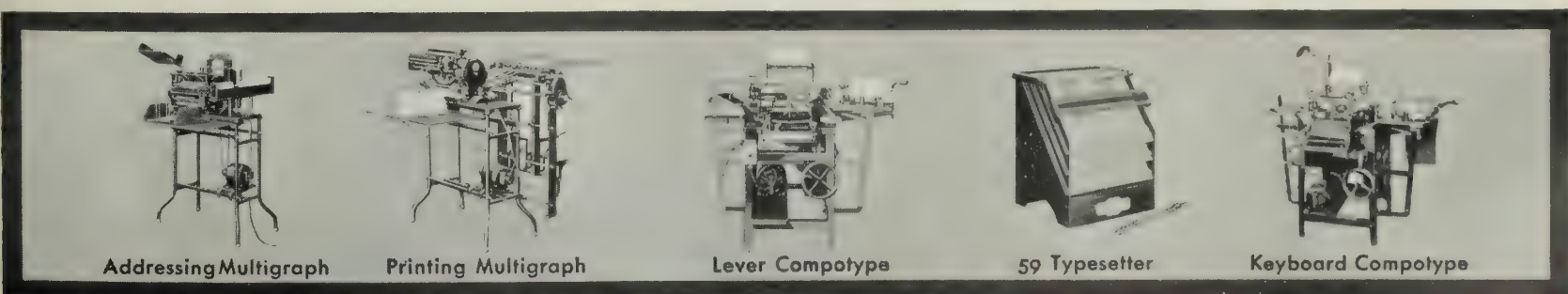
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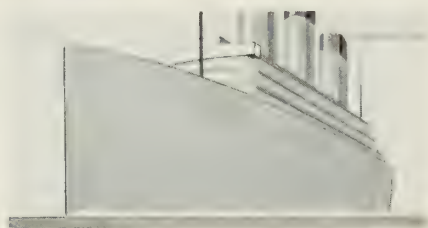


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**WHITE STAR LINE
RED STAR LINE
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Petroleum

[Continued from page 48]

Thus the Producer, but quick is the Refiner's reply. In the first place, the Refiner thinks that the Producer is putting altogether too much emphasis upon those 53,000,000 barrels of net import. Even if there were no imports, and the 1929 ratio of production and consumption were maintained, it would take years to exhaust the present surplus. Besides, even if the two Standard companies and Gulf stopped importing Venezulean oil, would such a concession prevent importation? Would not Royal Dutch-Shell (the world's largest producer of petroleum) still bring in huge quantities? Possibly a tariff wall would keep out imported oil (some of the independents were in Washington last month looking for such protection), but as long as the three American companies with the most important foreign holdings are competing with Sir Henri in world trade, they are likely to keep their cheap foreign production running at capacity. Besides, even the entire gross imports for the year hardly equal the output of a good-sized American field.

Restriction in 1929

Furthermore, says the Refiner, the yearly 1,005,000,000-barrel production figure which the Producer uses to establish the claim that there is no overproduction is not a sound figure because it represents a restriction in nearly every production to which restrictive measures have been vigorously applied. Throughout 1929 there was more or less restriction in nearly every representative field, so that the 1929 production figures by no means represent the total that would have been reached if every well had been allowed to run at capacity. Restriction agreements vary widely in different fields and are adopted for periods ranging from a month up, so that the 1929 production under wide-open methods cannot be accurately determined. At a conservative estimate, however, the difference between actual and capacity production would easily total 300,000,000 barrels and might run many millions higher. So the Producer is using a restricted figure to argue that restriction is unnecessary.

Less barrels, more dollars

And, finally, the Refiner maintains that when the Producer com-

plains about restricting his output, he must also admit that from this restricted output he gets a higher price per barrel. In 1926, for example (the last year in which domestic production plus net imports failed to equal demand), production was 771,000,000 barrels, and the average price per barrel was \$1.88. In 1927, when new fields raised production to 901,000,000 barrels—a surplus even without imports—the average price per barrel fell to \$1.30. The earnings of the big integrated refining companies also showed a pronounced dip. To be sure, it is very difficult to convince the small Producer who is just about keeping his head above water by running all his wells at capacity that the increase in price will compensate for his lessened output. It is even more difficult to convey this idea when the Producer knows that he has to sell his crude to the Refiner and that if he does not limit his production the big Refiner may try price-cutting as an added persuasive method. It is true, however, that less barrels per acre mean more dollars per barrel.

Meanwhile it is obvious enough that the Refiner is the controlling factor in the industry. It is in the nature of the business that this should be so, and it has been so ever since the point became apparent to the keen intelligence of old John Davison Rockefeller, who did not worry about who produced the oil as long as he refined and sold it. The Producers are to the Refiners much as the farmers are to the manufacturers. They are more numerous and less prosperous and not extremely capable of united action, and they have a strong tendency to forget their troubles, and the underlying causes thereof, whenever a rise in prices brings a temporary affluence. It should be added, however, that the farmer does not live in dreams of sudden wealth, whereas the Producer is frequently thinking of striking another Spindletop or bringing in a new Seminole Field. His attitude is romantic and courageous, and the very littlest Producer, the wildcatter, is the man who has brought in the majority of the big fields and gushers. But his is an attitude that is not always conducive to such a condition of stabilization as an industry so basic as petroleum demands.



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WHITE MODEL 55—3½-ton. Equipped with White's exclusive double-reduction gear drive, extremely rugged, efficient, economical. Various types of dumping bodies and hoists are available.

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WHITE MODEL 59 (Special)—New, high-speed, six-cylinder tractor or truck for city or long-distance hauling of extremely heavy loads. Particularly adaptable to unusual hauling requirements.

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Eating and Drinking the Imperial Dinner

[Continued from page 63]

guest's ability to judge wine.

Preparation of the wine began six hours before the feast. Two hundred magnums of Pommery and Greno were set to cool, and of Lafite twelve precious jeroboams (double magnums) were opened by drawing off their slender necks with red-hot tongs. A corkscrew, even in the most expert hands, might have stirred the sediment which underlies all great and old red wine. Moreover, the cork of a wine sixty-five years old can scarcely ever be drawn whole, but cracks and crumbles, thus defiling with bits of cork the precious fluid. There is also the risk that handling will break the huge fragile jeroboam, traditionally the proper receptacle for the aging of any great wine. (Professor Saintsbury still mourns the two he spectacularly lost when his terrier chased a rat between them in his cellar.) By all odds hot tongs are safest. After they had been applied, each jeroboam was tenderly divided between two decanters, these being allowed to stand for six hours in order to assume the room temperature at which they would be drunk.

To crown the Imperial Dinner with liquid gold, Mr. Reeves-Smith naturally chose the dessert wine which rapturous Frenchmen call "l'Or du Soleil en Bouteille et l'Extravagance du Parfait!" Produced and bottled solely at the château of Monsieur le Marquis Bertrand de Lur Saluces (an extremely likable young bachelor who spends most of his time either yachting or writing the history of Russian literature in Russian, which he has learned as a hobby), the peerless Château Yquem has been described by Mr. Reeves-Smith as "the rarest and richest, the sweetest and most wonderful white wine known to man."

Almost everyone, including women and Japanese, likes this costliest of wines. But it is so rich and voluptuously full bodied that even a glutton cannot take much of it without feeling too full.

Port from Portugal at the close of a dinner is as axiomatic to an Englishman as sherry from Spain with the soup, and 1904 port was chosen for the diplomatic reason that it is the "greatest vintage year of port in this century."

Asked the reason for his last choice, George Reeves-Smith said with a smile as bland and cheerful as rare old Lafite:

"Perhaps it may be necessary to offer reasons for producing a seventy-five-year-old brandy, but I do not know that any are necessary."

"The King!"

Of the five hundred guests only three passed so much as a single dish of the eight courses prepared by fifty chefs and served by one hundred and ninety waiters.

The twelve jeroboams of Lafite were ample. Of the two hundred magnums of champagne placed on ice, one hundred and fifty were poured by twelve cellarers, with the Japanese in magnificent fettle.

Some fifty guests figuratively wrote the name of their favorite drink in the empty space at the top of the menu—that is to say, they demanded cocktails.

Whatever he may have meant by it, Signor Zavatonni, maître d'hôtel of the Savoy, said: "Even louder than the French and Italians in praising the wine were the Americans." But General Dawes did not break his inflexible ice water rule, nor did Secretary of the Navy Adams. Mr. Morrow sipped the wines of his usual choice with his usual moderation. Ambassador Gibson, who has now resided abroad almost continuously for some twenty-five years, drank like a European, that is, with gusto and appreciation. No one seems to have noticed what Senators Reed and Robinson drank on this particular occasion.

The chief of the American Delegation, Secretary of State Henry Lewis Stimson, indicated to the cellarer at his elbow that he wished both Lafite and champagne. When these were poured, he responded to a private toast pledged him by Prime Minister James Ramsay MacDonald in Lafite with Lafite, afterward quaffing the bubbly and the purple without showing preference for either.

As was fitting, the formal toasts were, first:

"The King"

Second:

"The Sovereigns of the Kingdoms
and the Heads of the
States Represented"

And third:

"The Delegates to the London
Naval Conference"

These three, all proposed by Laborite Ramsay MacDonald, were drunk in the unrivaled, golden wine of the Marquis de Lur Saluces.

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Big Ship

[Continued from page 94]

1,500 passengers a trip, while the British and American ships carried 700 or 800. The *Leviathan* and the *Majestic* are older because the *Bremen* and the *Ile de France* have been born.

No line, therefore, can predict that its new monster will live (socially and economically) for more than twenty years. It must depreciate the ship as fast as it can. P. W. Chapman, vigorously and rather unexpectedly entering the shipping business, paid \$6,750,000 for the *Leviathan* and expects to have written it off in ten years; the projected monsters, *Leviathan II* and *Leviathan III*, will cost nearer \$25,000,000, and the annual depreciation charge cannot be less than \$1,000,000, although it is perfectly conceivable that the ships will be sound for a century. Add to this the ship's share of the line's general expenses, the interest charge on the investment (this varies greatly, as various governments make construction loans at various rates of interest), and it is clear that the margin of net profit is small.

Yet the monsters are essential to the modern lines, and if they actually lost money, they would in all probability continue to be built. For the big ship provides the *réclame*, the impetus which gives life to the entire line. Because of the *Leviathan's* prestige, others take passage on the *George Washington*, and shippers fill the 5,000-ton cargo space on the *President Harding*. Were there no competition, there is no question but that the United States

Lines would build its entire fleet along the lines of the new 700-foot, 20-knot ships it will put into service between New York and the Channel ports. But without the *Leviathan* or its equivalent, these ships would sail with thin passenger lists. The monster is a luxury, but even more it is a necessity.

Hence the *Leviathan II* and *III*, the *Bremen* and the *Europa*, the building problems of the English lines. Granting that the North Atlantic is over-tonnaged (which means simply that there are more berths than there are passengers), the lines must not stop building. Retire the old ships, turn them into other routes as new vessels are built (and the United States Lines is in a good position to do this), or scrap them altogether, but under no circumstances lag behind in the procession. There are too many ships, but not enough good ships.

Thus the shipping men argue, and upon the correctness of their argument rests the industry's future. With the *Leviathan* as a base, the United States Lines plans to build the best fleet in the North Atlantic. With the mail contract (currently being awarded) they will have substantial Government help. They have a keen operating chief in Joseph E. Sheedy; they have the considerable advantage of running American ships from American ports. Upon them appears to devolve the next experiment in making the North Atlantic passenger trade show satisfactory returns.

Copper Considered

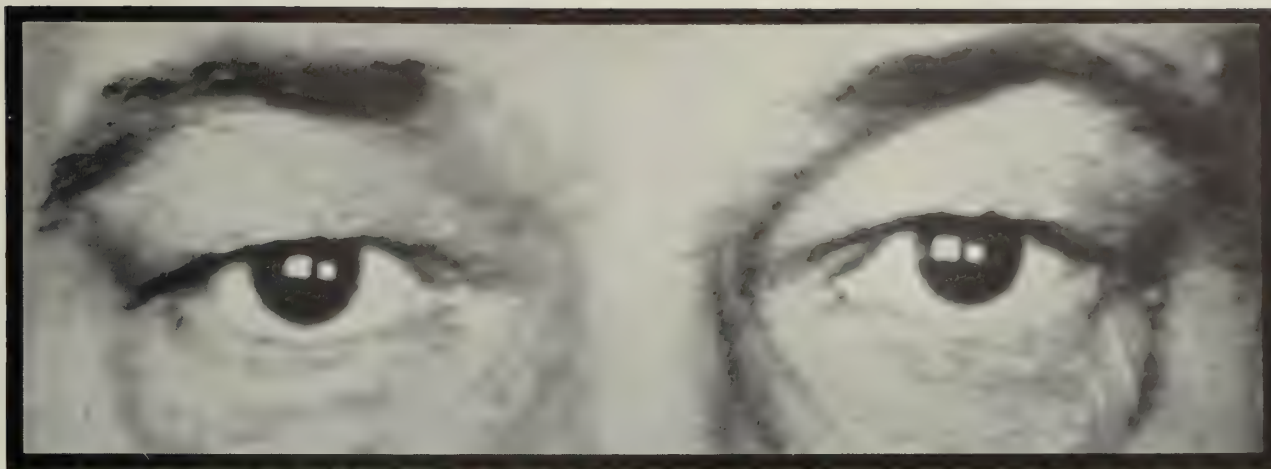
[Continued from page 71]

when War supplies were being dumped all around. Money-making based on the tremendous increase in electricity and other copper uses multiplied by a marvelous increase of efficiency in mining and especially in ore treatment.

The next decade: Unlimited possibilities for increased use of copper. Strength and maturity of organization to withstand any temporary slackness of demand and hence to reap profits when demand is normally or abnormally good.

All of which may further be summed up in an odd footnote. For several years people have been talking about how aluminum would

displace copper in electricity. Coppermen now declare the aluminum threat has passed. Why? Because of the airplane and the other things such as motor busses, wherein lightness is all important or extremely attractive. While aluminum men maintain that the aluminum supply is ample and that in some fields of transmission their metal will always be supreme, coppermen believe that when enough aluminum has been produced to supply the primary needs for it, there will not be enough left for services such as electricity. Copper, in short, regards the future of electricity as its own.



NOTE THE COUPON

Complete Information About How You Can Use Business Movies To Increase Sales, Cut Traveling Expenses—Sent Without Charge For Coupon Below.

An Odd Fact About Buyers' Eyes

That Enables You To Easily Win Interviews For Your Salesmen

New-Type Business Movie Speeds Up Selling Remarkably

WOULD you like to help your men get into buyers' offices more quickly . . . get orders without loss of time and money?

Then equip each one with a film that presents your line in the same way that your star salesman employs to introduce it.

And you'll find that prospects who ordinarily close their ears are glad to open their eyes.

Why?

Simply because, like any of us, buyers *believe* their eyes, yet *distrust* their ears. That this is true, your own experience will prove.

What Your Own Experience Proves

Doubtlessly, you have often met intelligent men who refused to buy on your first, second or even third call. Of course, there was a reason.

Perhaps it was *because they did not want to let you think they were being "talked" into something.*

Or, it may have been that *since they were unable to build a clear mental picture of your product and proposition immediately, they were afraid to talk lest they betray their ignorance and so lose face in your eyes.*

Yet, as soon as they understood your line perfectly and gained more confidence in the house in back of it, they were glad to buy.

Business Movies Save Time and Money

By establishing instantly the right kind of a picture of your line in a buyer's mind, a properly constructed movie will increase the number of first call sales. By reducing the number of visits necessary to sell prospects, it will cut traveling expenses. And, since a prospect receives only the kind of impression of your firm that you want to get across, your movie will enable you to better hold business that you win.

That is what a business movie of your line will do for you—but it must be expertly made.

How A New Technique In Making Business Movies Assures Success

To successfully build in a buyer's brain a complete panorama which shows exactly what your product or proposition is and how it will prove advantageous to him, the new-type business movie reveals each picture in its proper idea-relation to the one immediately preceding.

In other words, the technique of the master salesman is the technique of making a successful business movie. It is knowing how to hook up instantly understandable ideas in picture form in a way so that when they are flashed on a screen before the buyer they travel one after the other, like freight cars going into a tunnel, through his eyes to his brain.

Pathscope offers you just such a "star" movie of your product that not only presents your line

to buyers in the same manner that you, yourself, have developed from years of experience, but with the clearness of photography, the forcefulness of logic, the persuasiveness of the action in demonstrations, and the glamour of showmanship.

Thus, the one quick way to a buyer's brain . . . the eye way . . . is easily and surely gained by this step-by-step, confidence-building picture method.

Movies Give Fresh Interest To Your Sales Story

No matter whether you are selling a service, a process, or merchandise . . . a well-planned modern movie will help boost sales.

And, when one of your salesmen sends in his card and asks to show a movie . . . he'll be invited in by the right people . . . by the ones who make decisions.

With a light, portable projector and a Pathscope film, your representative is easily able to persuade one person or a group to buy.

A Complete Professional Service

Pathscope is equipped to plan and produce your selling movie from scenario to finished film. Directors, trained in the specialized problems of business movie-making, work closely with clients at every step.

The cost of a film is moderate. We would be pleased to plan a scenario for you and submit an estimate. No obligation, of course.

Send Now for Complete Information FREE

THE PATHSCOPE CO. OF AMERICA, INC. E-AP
35 W. 42nd St., New York

Kindly send me complete information about the new-type business movie. No obligation of course.

Name

Company

Street

City State



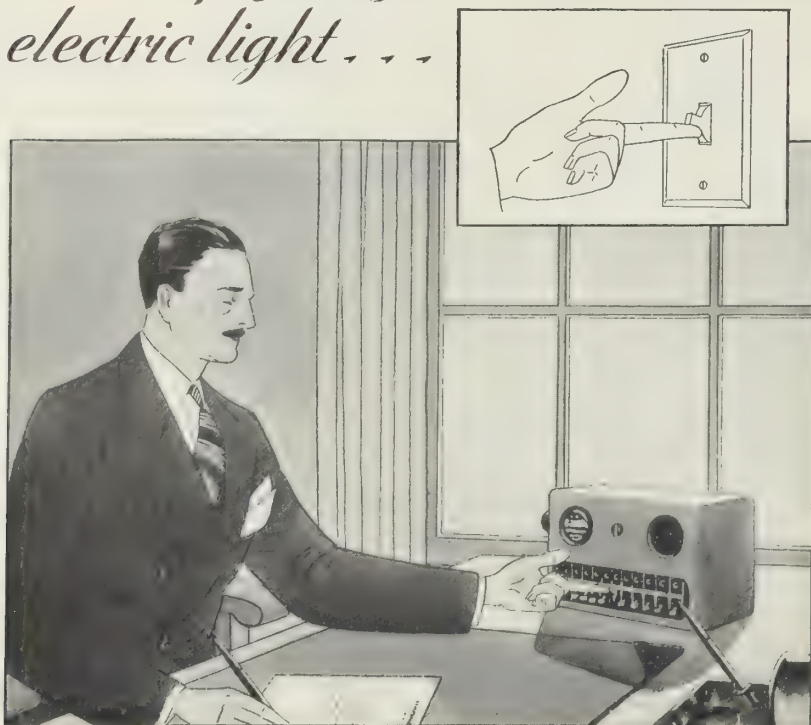
Courtesy Eastman Kodak Company

With a light, portable projector, your salesman is able to show your selling film right on a prospect's desk.

THE PATHSCOPE CO. OF AMERICA, Inc.

Producers and Distributors of Business Movies: Sound, Silent and Still Picture Films

As simply as you switch on an electric light . . .



YOU SWITCH ON THE VOICE OF AN INDIVIDUAL

SUPPOSE you had to 'phone for *light*—or send somebody for it—or go fetch it yourself! Unthinkable, isn't it? . . . The natural thing is to press a switch and have light instantly. »» But in your office, when you want to ask questions or issue instructions—why are you still content to 'phone for members of your staff, send somebody for them or go visit them yourself? »» Why don't you touch a switch and get your man in conversation *instantly* . . . like getting light? »» That's what the DICTOGRAPH SYSTEM OF INTERIOR TELEPHONES is for . . . to put executives into instant voice-to-voice contact with all members of the office personnel without taking any one away from his post. »» With DICTOGRAPH on your desk, you merely *flick a key and talk* . . . as simply and directly as though the other person were there beside you. A sensitive microphone picks up your words. A loud speaker brings back the answer in softly resonant, *natural* tones. You are scarcely conscious of an intervening carrier in Dictographic conversations. »» The speed of DICTOGRAPH is contagious. Office routine accelerates as time-wasting methods are discarded. And telephone service improves as the burden of "inside" calls is lifted from your switchboard and the lines are cleared for legitimate traffic, in and out. »» It will take only a few moments to show you DICTOGRAPH in actual operation on your desk, and you will be under no obligation whatever. Consult your telephone directory for our address in your city. Or write direct to DICTOGRAPH PRODUCTS COMPANY, INC., Candler Building, West 42nd Street, New York.

DICTOGRAPH SYSTEM OF INTERIOR TELEPHONES

The Modern Miracle of Business



Gillette's 800,000,000 Market

[Continued from page 112]

Enter the headquarters of the Gillette company in Boston, Massachusetts, at 15 West First Street. A rather depressing waiting room. White-painted steam pipes overhead. The walls are white, but from the floor five feet up they are painted brown, the kind of brown you associate with armories. Wooden benches, a nickel-in-the-slot telephone booth partly hiding a poster of a curly headed young man shaving himself. A girl at the desk under the life-size picture of King C. Gillette. Awards: "The War Department of the United States of America recognizes in this award for distinguished service the loyalty, energy, and efficiency in the performance of the War work by which Gillette Safety Razor Company aided materially in obtaining victory for the arms of the United States of America in the war with the Imperial German Government and the Imperial and Royal Austro-Hungarian Government."; "Esposizione internazionale delle industrie e del lavoro—Torino, 1911—diploma di medaglia d'oro." Many others.

A large room on the eighth floor. The shades perpetually drawn. Over each desk a shaded electric light. Be it gloomy or shiny during the eight-hour day, the testing room of the Gillette Safety Razor Company knows no difference. At each desk a girl. Perhaps five hundred in all. The room is quiet as the reading room of a public library. Except for the incessant chinking of the blades. And an occasional monotonous bell that sounded like a cowbell and rings a certain number of punctuated times to summon a supervisor. There are only three tests—visual, tactile, the hair test. But they do them over and over again. The visual: you stack the blades on a prong and look at them under the light. The trained eye will immediately detect a flaw. The tactile: run your thumb along the edges of the stacked blades—four times—once for each of the two sides of the two edges. The hair test: take a blade in your left hand, take one or two hairs from the pile in front of you, cut. If you nick the blade, it is no good and you must send it back. After the retesters become proficient, they get a bonus for every faulty blade they discover. In one corner of the room nearly a hundred girls are learning. They

too, like the others, will in time become proficient, earn bonuses, have their eyes examined once every six months by one of the best oculists in Boston. A good girl, a supervisor will tell you, can inspect from 15,000 to 20,000 blades a day. The girls never speak. Some are pretty; all have silk stockings. Many applicants, the supervisor will continue, have to be turned away because they can't sit still. But the chairs are scientifically constructed to ensure the most normal and comfortable posture. No, the girls rarely cut themselves. The company has its own hospital, its staff of nurses. But they treat boils or colds or sprains. Rarely cuts.

The fundamental idea was not King Camp Gillette's but Mr. William Painter's, a friend of his. It was Mr. Painter who had procured for Mr. Gillette his position with the Baltimore Seal Company, a firm which manufactured seals for stoppering bottles (later the Crown Cork and Seal Company). One day in 1891 Mr. Painter said, "King, you are always thinking and inventing something. Why don't you try to think of something like the crown cork, which, when once used, is thrown away, and the customer keeps coming back for more—and with every additional customer you get, you are building a permanent foundation of profit." King C. Gillette thought and thought . . . until four years later, in 1895, he was shaving one morning and found the razor dull and . . . "as I stood there with the razor in my hand, my eyes resting on it as lightly as a bird settling down on its nest, the Gillette razor was born. I saw it all in a moment . . ."

The company was founded six years later, in 1901. That year and the following year no razors were sold. In 1903, 51 razors were sold and 168 blades. In 1906 the company paid its first cash dividends, \$130,000. It has paid yearly dividends ever since, a total through 1929 of \$73,982,430.

Mr. Gillette, although still president, is no longer very active in the company. He writes letters on anniversaries and that sort of thing, visits the plants now and again, but spends most of his time in his California home or traveling. Active head of Gillette now is shrewd, able, musical, golfing, yachting Vice President Frank J. Fahey.



Harbor Trust Building,
Boston; Blackall, Clapp
& Whittemore, Archi-
tects, Boston; James
Stewart & Co., Builders,
New York.

Gulf States Utilities Co.,
Beaumont, Texas; De-
signed & Built by Stone
& Webster Engineering
Corp., of Boston, Mass.



W. F. Hall Printing Co.,
Chicago; Weiss &
Niestadt, Architects and
Engineers, Chicago.



The Kellogg Company,
Sydney, Australia; De-
signed & Built by John
S. Metcalf Co., Chicago.

If the roll were called

A ROLL call of Bayley installations would reveal an imposing list of buildings in outstanding industries and other prominent fields of endeavor — buildings that tower into the sky — buildings that cover several blocks — buildings that are located near and far.

The reasons for the growing use of Bayley Steel Windows and Steel Doors by leaders in all these groups are: a proven product and a dependable engineering service.

No organization has a richer background of engineering experience — no organization is actuated by higher standards — no organization strives harder to win the approval of architects, contractors and owners in the design and quality of its products.

A Bayley representative will gladly call and explain the scope and value of Bayley engineering cooperation on window and door problems. Illustrated folders on window or doors for any type of building will be mailed on request — The William Bayley Co., 148 North St., Springfield, Ohio.

It would include many of the most important and best known structures in these representative groups: Cereal Plants, Bakeries, Candy Factories, Flour Mills, Dairies, Power Houses, Water Works, Paper Mills, Railroad Shops, Printing and Publishing Plants, Airports, Public Buildings, Grain Elevators, Garages, Warehouses, Stores, Restaurants, Markets, Office Buildings, Hospitals, Libraries, Laboratories, Recreation Buildings, Apartments, Residences, Churches, Colleges.

BAYLEY

STEEL WINDOWS & DOORS

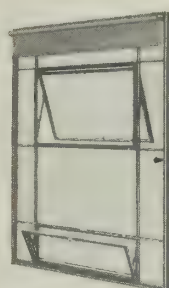
District Offices

New York, 67 W. 44th St.
Boston, 5 Park St.
Chicago, 75 E. Wacker Drive

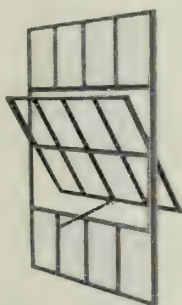
Cleveland, 449 Terminal Tower
Washington, 1427 I St., N. W.
Atlanta, 407 Bona Allen Bldg.

Springfield, O., North St.

Sales Agencies also in Principal Cities



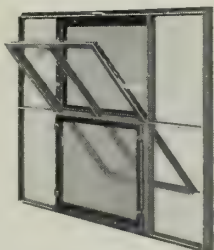
Projected Windows
Architectural



Pivoted Windows



Casement Windows



Pivoted Windows Screened



Airport Doors

after shaving
after bathing
after exercise



this famous
French formula
for the skin

For tired faces and tired bodies alike . . . for the tiny nicks left after the razor-blade—the relaxed tissues and open pores after a hot bath—the muscles stiffened by violent or unaccustomed exercise . . . nothing has ever been perfected quite like Pinaud's Lilac (Lilas de France).

Made from essences still compounded by Pinaud in Paris—as it has been for nearly a hundred years—this delightful toilet-water and astringent with its faint fragrances of lilacs, has been the companion of ladies and of gentlemen the world over since 1848.

Its refreshment is instant . . . its fragrance smartly unobtrusive . . . its deodorant and astringent action unailing. Pinaud will be delighted to send you a sample bottle for your personal use free, if you will address: Pinaud, Inc., Dept. F, 220 East 21st Street, New York.

Pinaud
PARIS • NEW YORK

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World's Record Hill

[Continued from page 72]

of the Panama Canal; before Jackling's army is through with the Hill, they will have shaved it to the level of the plain, taking twice as much material as was furrowed from the groove across the Isthmus and 625,000,000 more tons of copper ore.

The miners who attend to this profitable demolition live in huts along the canyon and at the open end of the canyon in Copperton, a "model" community which the Utah Copper Company has built for its employees.

Beyond, these, beside the noisy creek which is the town's open sewer, the Main Street of Bingham winds up the canyon toward the Utah Copper Company mines. It goes from the neat shacks of Copperton by a deserted smelter, a leaching plant, broken-down, solitary houses, and finally through the commotion of Bingham. In Bingham, a name properly applied to the group of houses that clings to the end of the canyon in front of the mountain, there are now churches, a Mormon meetinghouse, a Lions Club, a Kiwanis Club, movie theatres, drugstores, soda-fountains. A ramshackle, tired street, it approaches with a minimum of dignity the old mountain which its men have carved into a huge, ironic theatre. Its appearance of having suffered, in a moment of gaiety, some shiftless defeat is broken here and there by a flophouse where lights are lit and men sit with their feet on a veranda railing, or by the square

spark, on the hillside or in the canyon, of a fire showing through the doorway of an isolated hut.

The bunkhouses which the Utah Copper Company provides for its miners stand far back in the hills, on the outskirts of the mines. Since the men who have come from the corners of the world to demolish the mountain do not understand each other's speech, separate houses have been built for the Chinese, the Mexicans, the Albanians, the Italians, the Japanese. Downtown, there is a messhouse for Americans and the less insistently sedentary aliens.

Because the mines are worked in night shifts as well as through the day, there is never a time at which this dark and irregular Main Street is not stirred by a shuffling somnambulant energy. The shops are closed and the married miners' houses, down the canyon at Copperton, are dark, but in Bingham, miners lean on their elbows along the counter of an all-night lunchroom, eating a midnight breakfast and talking of the work that they will finish in the dawn.

The men who live in the bunkhouses are amused by the antics of "Babe," the French wife whom Jack Kennedy, the general foreman of the Utah Copper Company, brought back with him from the War. They admire the beautiful girl who is the wife of Endow, the keeper of the Japanese bunkhouse. The man at the head of this uproarious, solitary camp is "Jed"



Cliff Bray

GENERAL MANAGER CATES, UTAH'S FIELD COMMANDER

“It’s the Camel blend!”

The mild and fragrant blend
of choice tobaccos makes
the smoking of every Camel
Cigarette a pure delight.



Camel

the better cigarette

MORE REINFORCED CONCRETE DOCKS

6 New Clients in 30 Days

The unquestioned supremacy of Reinforced Concrete Docks and Piers is best evidenced by the character of their owners.

In January six additional outstanding dock owners adopted the FERGUSON REINFORCED CONCRETE DOCK—consistently preferred by good engineers and repeatedly upheld by the Federal Courts in point of patent protection.

READ THE ROLL CALL

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Chicago & Northwestern
Ry. Company
Grasselli Chemical Company
City of Detroit
Union Carbide and Carbon Co.
Solvay Process Company
Pennsylvania Railroad Co.
Canton Co. of Baltimore
Winkworth Fuel & Supply Co.
Chicago, St. Paul, M. & O.
Ry. Company
Michigan Northern Power Co.
Lake Superior & Ishpeming
R. R. Company
The M. A. Hanna Co.
City of Cleveland
C. & B. Transit Co.
State of California
City of Houston, Texas

Kelley Island Lime & Transport
Company
Clarkson Coal and Dock Co.
Duluth and Iron Range Ry.
Buffalo Dry Dock Co.
Chicago Shipbuilding Co.
Central West Coal Co.
Bethlehem Steel Co.
Standard Oil Co. of New Jersey
Sun Shipbuilding Co.
Virginia Shipbuilding Corp.
Peerless-Egyptian Cement Co.
City of Wyandotte, Mich.
A. J. Dupuis Co., Detroit, Mich.
Michigan Steel Castings Co.
Petoskey Portland Cement Co.
Wm. Cramp & Co.
Havana Docks Corporation
City of Norfolk
Detroit Iron and Steel Co.
The Cleveland Cliffs Iron Co.
City of St. Petersburg
Gulf Refining Co.
D. & C. Navigation Co.
Anaconda Copper Co.

Houston Compress Co.
Stewart Sand Company of
Kansas City
Anderson-Clayton Company
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Mapes & Ferdon, Ltd.
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Humble Oil Co.
Wisconsin Steel Co.
Edward W. Bissell Estate,
Detroit, Mich.
Chester Shipbuilding & Dry
Dock Company
Baltimore Dry Dock
& Steamship Company
Sanford & Brooks Co. of
Baltimore, Md.
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Michigan Ammonia Works
of Detroit
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FERGUSON
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DOCKS

U.S. Newspaper Editors Look at Fortune

"Probably the largest and surely the most luxurious magazine ever dedicated solely to business. Less flippant than its irreverent elder brother TIME, FORTUNE retains the same spirit of zestful inquiry and the same unwillingness to accept popular ideas merely because they are popular. The Publishers are to be congratulated for a beautiful and vital exposition of America's specialty, her business and her industry."

Hartford Courant

"It treats industrial subjects with a wealth of artistic photographs and fine printing, precisely as if they were some precious aesthetic theme."

Baltimore Sun

"Here is certainly one of the greatest achievements in periodical printing that has ever been recorded."

N. Y. Evening World

"Should make itself felt in a field to which the most virile and productive intelligence of the world is now so largely applying itself."

Brooklyn Times

"Sumptuous to the point of rivaling the pearly gates—with its photographs, its almost lyric elaboration of the detailed process of 'disassembling' the hog, it goes Carl Sandberg one better in poeticizing the stock yards of Chicago."

N. Y. Times

"Another great success; another triumph for a publication carefully executed according to specifications drawn to fit the needs and requirements of a clearly visioned market."

Editor and Publisher

"Orchestrates in a tremendous symphony the varied strains of 'the oldest of the arts and the newest of the professions'."

Daily Princetonian

"The swankiest magazine we have ever seen—the color work makes you stand back and gasp over its reality."

Roanoke (Va.) Times

"Extraordinary publication, different from any other magazine."

Asheville (N. C.) Citizen

"Destined to take first rank among the world's greatest magazines."

Fort Wayne News Sentinel

"Difficult to think of a more brilliant example of modern American journalism. Much has been said about the glamour of America's present-day industrial civilization; much about the sheer romance of modern business but nowhere have these things been depicted more graphically than in the pages of this beautiful magazine."

Galveston (Texas) News

"Trailing the romance of big business they have not hesitated to follow the path of those who have something to sell. If they mirror an industry through the accomplishments of a single concern, their justification is that the story is an interesting one. The job has needed doing, for beauty and the business man have been strangers too long."

Christian Science Monitor

"Unique contribution to the world of business and publishing."

The (Toronto, Canada) Globe

"The Aristocrat of Business."

Boston Transcript

"The Rolls Royce of magazines. Striking originality is the keynote—as different from other monthly magazines as TIME is different from other weekly publications."

Savannah (Ga.) Press

"Admirable entertainment and much useful information for the millionaire or for any of the rest of us who can pay \$1 a copy or \$10 a year."

Emporia (Kansas) Gazette

"Colorful, magnificent, superb in illustrations, graphic in word portrayal—for the edification of the economic mind, for the keen delight of lovers of the artistic."

Wichita (Kansas) Beacon

"Transforms the beast of business into a prince of beauty."

Miami Herald

"A new step in magazine publishing."

Knoxville (Tenn.) Journal

"The most beautiful piece of printing to come to our desk in months. Certainly the finest bit of periodical manufacture in existence."

New Haven Journal-Courier

"Its illustrations are the best yet achieved in any magazine."

Kansas City Journal-Post

"A magnificent tribute to business. Words adequate to describe this de luxe journal of business are available but they would be regarded as gross exaggerations save by those who have examined FORTUNE."

Harrisburg (Pa.) News

"Its publishers have accomplished a notable achievement—and done it just a little too perfectly. Radicals, debunkers, philosophers, buffoons and Jeremiahs have failed; and where they have failed, the cult of the de luxe has itself accomplished a complete success in these few pages of print."

San Diego Union

TIME, INC., Publishers of FORTUNE and TIME, the Weekly Newsmagazine



RAW MATERIALS NOW WASTED

TWO classes of industry are especially favored by conditions that invite them to comfortable profits in Piedmont Carolinas:

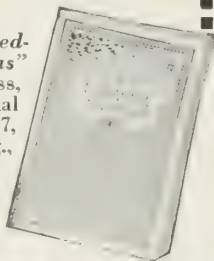
(1) An abundance of vegetable oils and cotton linters invite makers of paints and lacquers to utilize these raw materials.

The thriving Piedmont Carolinas' furniture industry and the \$102 per capita building program of this region combine to offer attractive markets "at the door."

(2) Coincident to the furniture industry is a wood-waste problem that invites another branch of the chemical industry to profitable investment. Acetic acid, wood alcohol, and a dozen other products now lie tied up in waste piles of Piedmont Carolinas' furniture factories.

The facts are well worth investigating. For the bare statistics presented in this book are sufficient to point the way to many to make fortunes equal to those who have pioneered in this section in textiles, furniture, rayon manufacture, and in many other lines.

Write for "Piedmont Carolinas" today. Address, please, Industrial Dept., Room 2937, Mercantile Bldg., Charlotte, N.C.



DUKE POWER COMPANY

SOUTHERN PUBLIC UTILITIES COMPANY
AND OTHER ALLIED INTERESTS

Shilling, whose father had the job before him. Something in his courage makes his men admire him; they speak of him with grudging respect when they are working in three shifts a day through a winter of knee-deep snow.

To live in a company flophouse, it is necessary to pay rent. To avoid this necessity, it is possible to drag an empty packing box into the hills, fit it with bunks, put a stove on the leveled earth of the floor, and buy a month's food in Bingham on the first pay day of every month. The sparks, high above the forlorn street in the canyon, are made by the fires in these houses. Greeks, Chinks, or Spics who refuse to pay a dollar for the hospitality of the flophouses of the town live in them, three or four together so they can take turns cooking and get up a game of cards in the winter without going outside.

The Bingham district, by which is meant the Utah Copper Company's Hill, produces more copper than any other district in the United States. The output of Bingham's closest rival, the Anaconda mines near Butte, Montana, is not increasing as rapidly as Bingham's is. Abroad there are two districts, one in Chile, one in Africa, which threaten the Hill's supremacy.

The Chuquicamata mines of Chile, which are believed to include the largest known body of copper in the world, have been increasing their output of copper

more rapidly than Bingham's since, roughly, 1915. In Africa, in British Rhodesia and the Belgian Congo, where coffee-colored Bantus are paid twenty-four cents a day to scrape it up, the copper deposits lie close to the surface. The African ore is exceedingly rich, usually 4 or 5 per cent. No one knows how much of it there is. The four greatest enterprises in Africa are the N'Changa, the N'Kana, the Katanga, and the Roan Antelope. The four greatest mines of the world are, in the order of their annual production in short tons: Utah (Bingham), 136,912; Chile Copper (Chuquicamata), 132,932; Anaconda (Butte), 116,873; Braden (Rancagua), 109,136.

The Hill remains the most extraordinary as well as the most important of these four. In the other mines, the copper deposits are diffuse, and they are mined over a wide area with scattered shafts and separated camps. The copper in the Hill, washed to the surface by the waves of a forgotten ocean, is bound tightly together and the operations of its employment are faintly analogous to those of an old lady unwinding a ball of yarn and knitting an enchanted garment with its copper threads. The history of the Hill is now the story of copper wires carrying electricity around the earth; the chapter of its change is the story of the Utah Copper Company and of Daniel Cowan Jackling.

Mr. Grigsby

Mr. Grunow

[Continued from page 109]

Then the whole world knew Moran and Mack and Majestic, two blackbirds and a radio.

A night fire in the finishing plant of the works broke out at the peak of Majestic production. Grunow arrived at the scene at two in the morning after a wild ride from his home. The shop, still in flames, was a sorry sight of confusion and ruin. Grunow looked glum. He had reason enough. Driving all their 12,700 employees, they were just keeping abreast of demands with a production of 6,000 sets a day. The shop foreman, who had been directing salvage work, took one look at his boss's face and made a hurried calculation on his fingers. There was comfort in his voice.

"Don't worry. We'll be able to get everything set to start production again by next Tuesday."

"Tuesday hell!" exploded Gru-

now. "We'll start tomorrow."

Grunow wandered every day about the plant with his eyes wide open. He came upon a young man, a new employee, whose job it was to place the last rivet on the radio "chassis." He watched him critically for a moment, then suggested a better method. The young workman lifted scornful eyes to the man in the white collar who looked like an office clerk spending his lunch hour nosing around the shops.

"Who in the devil told you to butt in?" he barked. "This is the way the foreman told me to do it, and what he says goes with me."

Grunow turned on his heel, sought the foreman.

"Say, that's a God-damned good kid you got over there."

They watched their stock fly upward on the Chicago Stock Ex-



"A quiet haven where
the shattered bark
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YEAR BY YEAR, in the same spirit that prompts them to provide for the material well-being of those who shall survive them, increasing thousands of thoughtful people are also providing inviolable and permanent sanctuary for those who shall go before them.

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Many Advertising Experts say: "Tell them about your product... what special services you have to offer... but **DON'T** show your building." That's sound advice, but like the man who has just moved into a fine, new home, we take pride in showing our own new premises* ... that's human nature.

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Photo by Unemys

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NEW YORK

AND AT 43 CONDUIT STREET LONDON W.

change. During the first ten months of 1928, the first months of their radio operations, they saw the stock, which had been worth only \$25 a year before, rise from 54 to 400. In October they split it, four shares for one, and the new shares mounted to 149. But there were wide fluctuations on the board, and in the first seven months of 1929 Grigsby and Grunow saw it as low as 119 and as high as 172. They split the stock, four for one again, and in August, soon after the split-up, listed it on the New York Stock Exchange. There it reached a high of 70 before Grigsby-Grunow, along with every other stock, tumbled in the market crash. Down it came to 14 $\frac{1}{4}$, but even at that low figure, considering stock dividends, rights to buy more stock, and stock bonuses to officers, its value represented the phenomena of Grigsby-Grunow growth in the radio industry. Before the crash each of those little shares, worth \$25 in 1927, attained a market figure of more than \$1,100; and today, with little or no recovery from the crash, they are worth about \$250.

The surge upward of their stock reflected a surging business behind it. Back in 1926 the company closed a fiscal year with a gross business of \$2,075,590. In 1928 at their entry into the complete receiving set business, Grigsby-Grunow looked back on a fiscal year with a \$5,861,225 gross business. One year later they put the finishing touches on another year which had had a gross business of \$49,318,669. Undoubtedly when Mr. Grigsby showed the figures to Mr. Grunow and pointed out in his placid way that the net income for the year was over \$5,000,000, both of them thought of sun-visors and \$350,000 worth of pyralin turned into junk.

As the world looks at them, Mr. Grigsby stands in Mr. Grunow's shadow. Mr. Grigsby is merely a figure of finance while in Chicago Mr. Grunow is rapidly becoming a

figure of legend. The best Mr. Grigsby has for romance is a financial statement and a Twelfth Night Ball attended by his good neighbors in costumes ascribed to the period of Henry VIII. Mr. Grunow is building a million-dollar mansion equipped, among other glamorous things, with an onyx marble bathtub and gold-plated pipes. Mr. Grigsby has only built a swimming pool for his neighbors' children. Mr. Grigsby has given up rabbit hunting, but Mr. Grunow keeps twelve thoroughbred horses in a plush-carpeted stable where electric radios play while the steeds merrily munch their oats. And beyond all that, Grunow's vivid wealth stands in spectacular contrast to his boyhood in the crowded German section of the Chicago west side. Mr. Grigsby had advantages. He may be said to have begun as a capitalist, for after all his father was part owner of a small brickyard in a little Illinois town. Mr. Grigsby's story is suburban tableau while Mr. Grunow's is metropolitan melodrama.

It is not enough in Mr. Grunow's opinion for the pretty bird to sing for its supper. Singing is beside the point. What the finch which graces a cage in his office must do is work for its supper, and it gets no credit for any entertainment it may have furnished in the ephemeral business of song. The bird's food is placed on a small car on an inclined plane nearly a foot away from the cage, and to bring the seed within reach the finch must pull the car by means of a string, inch by inch up the incline, using both its bill and feet. To get a drink of water, the bird must draw up a small bucket. Under Mr. Grunow's example and training, the bird has developed a love of work which it expresses by giving entirely gratuitous song to Mr. Grunow all day long while he labors for his supper and other things besides.

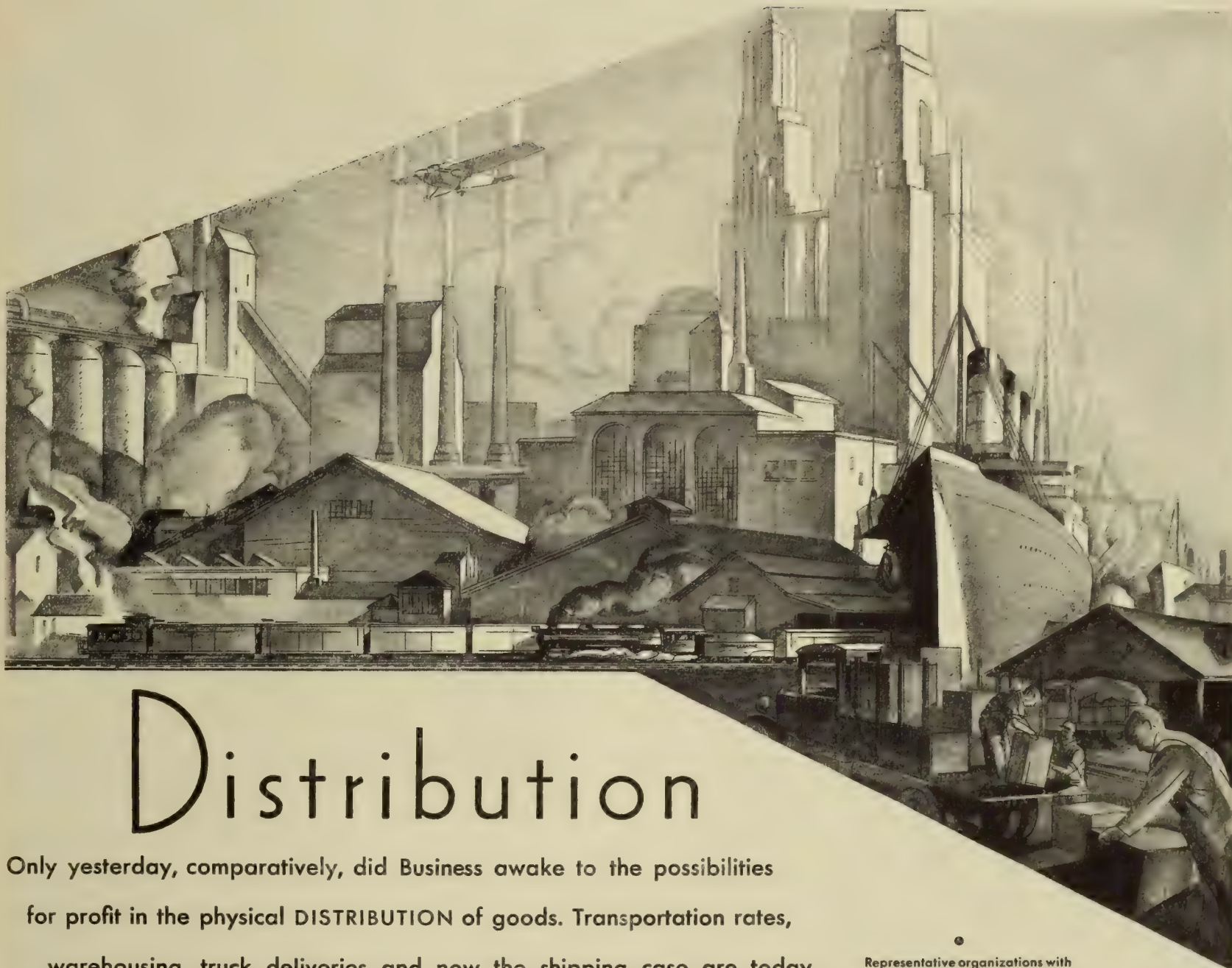
Mr. Grigsby does not own a bird.



MR. GRUNOW



MR. GRIGSBY



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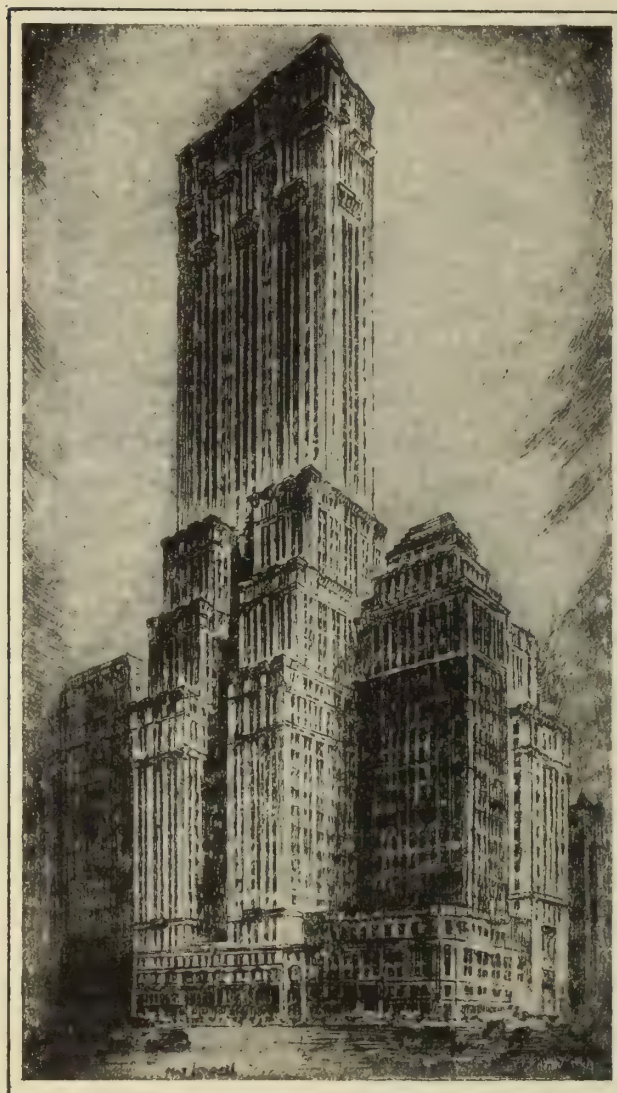
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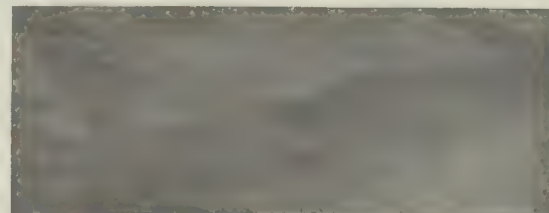
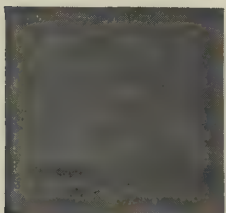
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U. S. Aviation Companies

ON page 85 of this issue, FORTUNE prints a partial list of the subsidiaries and affiliates of the four major groups in the aviation industry: Curtiss Wright Corp., Aviation Corp., United Aircraft & Transport Corp., and Detroit Aircraft Corp. The following is a supplementary list of companies, also incomplete.

Certain important interests in the industry are not listed here, notably the Ford Motor Co., whose Stout Metal Airplane Co. division makes the excellent Ford transport. General Motors Corp., a large stockholder in various aviation companies, is not included, nor are certain independently built planes such as the Bellancas and the Command-Aires:

AVIATION CORPORATION OF THE AMERICAS

Pan American Airways, Inc.

Mexican Aviation Co.

New York Airways, Inc.

Peruvian Airways, Inc. (50 per cent outstanding shares)

Pan American Grace Airways (50 per cent)

WESTERN AIR EXPRESS CORP.

Aero Corp. of Cal.

West Coast Air Transport

Mid-Continent Air Express

Standard Air Lines Inc.

CONSOLIDATED AIRCRAFT CORP.

Fleet Aircraft Corp.

Thomas-Morse Aircraft Corp.

National Flying Schools, Inc.

Kinner Airplane & Motor Corp. (substantial block of stock in this)

Frontier Enterprises, Inc.

Niagara-from-the-Air, Inc.

FEDERAL AVIATION CORPORATION

Washington-New York Air Lines

Metropolitan Air Terminals

Washington Airport

Washington Air-Terminals

Russell Parachute Co.

ALEXANDER INDUSTRIES, INC.

Alexander Film Co.

Alexander Aircraft Co.

Pyramid Film Co.

ALLIED AVIATION INDUSTRIES, INC.

Lambert Aircraft Engine Corp.

Mono Aircraft Co.

Aviation Accessories Corp.

Hurricane Aircraft Engine Co.

Royal Airways, Inc.

ALLIED MOTOR INDUSTRIES, INC.

Henney Motor Co.

Van Sicklen Corp.

Weatherproof Body Corp.

Great Lakes Aircraft Corp.

American Cirrus Engines, Inc.

American Aeronautical Corp. (Savoia seaplanes)

ATLANTIC SEABOARD AIRWAYS, INC.

International Airways, Inc.

Potomac Flying Service

Hoover Field

Haines Point Flying Service

Gettysburg Flying Service, Inc.

AIR INVESTORS, INC.

Comet Engine Corp.

The Aircraft Engine Corp.

United Aviation Corp.

Scenic Airways

Wyoming Airways, Inc.

AMERICAN EAGLE AIRCRAFT CORP.

Lincoln Aircraft Co., Inc.

Porterfield Aviation Interests



No time to look ahead

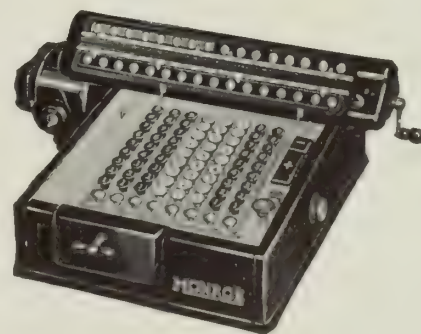
Sell this man a motor for his boat? You wouldn't have to sell him, he'd buy before your sales talk was half started. He wants to get ahead as fast as possible, to set his face towards the bow and give his whole attention to avoiding reefs and rapids in his course.

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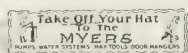
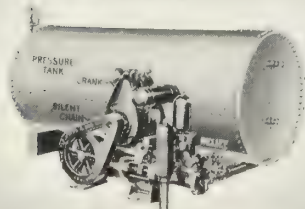
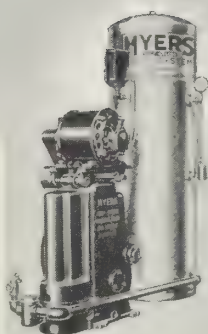
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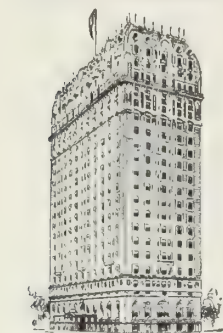
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- Crescent Propeller Co.
- Porterfield Flying School, Inc.
- ARROW AIRCRAFT & MOTORS CORP.
- Patriot Mfg. Co.
- CHICAGO AIR SERVICE, INC.
- Gray Goose Air Lines, Inc.
- North Shore Airport Co.
- Sky Harbor
- There is one great cross grain running through all these concerns. It is the Bendix Aviation Corporation, and it makes the various parts that every airplane and motor manufacturer needs. The group, in part:
- Delco Aviation Corp. (*Ignition System*)
- Scintilla Magneto Co.
- Bendix Brake
- Eclipse Machine Co. [*Eclipse Aviation Corp.*] (*Starters*)
- Bendix Cowdry Brake Tester Corp.
- Stinson brake control mechanisms (*Manufactured by Stinson Aircraft Corp.*)
- Pioneer Instrument Co.
- General Instrument Corp.
- J. P. Marsh Co. (Gauges and heat control appliances)
- American Paulin System, Inc. (Instruments)
- Tiffany Mfg. Co. (Gauges)
- American Propeller Co. (*Heath propellers and adjustable and reversing mechanisms*)
- SKY SPECIALTIES CORPORATION
- Heywood Starter Corp.
- Simon Airplane Appliance Co.
- GENERAL AERO CORP.
- CORD CORPORATION
- NEW STANDARD AIRCRAFT CORP.

Appendix

Glossary of circus terms

Art, The	Performers
Baggage stock	Draft horses and mules
Banner	Necktie
Bennie	Overcoat
Big top	Main tent
Big tub	Bass drum
Big turkey	Ostrich
Big worm	Boa constrictor
Blues	Flat or bleacher seats
Boss windjammer	Bandmaster
Build-up, A	Publicity
Bull	Elephant
Cat	Tiger or any member of the cat family
Cherries	Balloons
Convict	Zebra
Cookhouse	Dining tent. All other tents are "tops." This one alone is a "house"
Cow	Rhinoceros or hippopotamus
Deep mit man (also leather lifter, smart-boy, and dip).	Pickpocket
Dog	Hyena, wolf, etc.
Double saw	Twenty dollar bill
Flag is up, The	Meal being served
Frying pan	Cornet
Gaffer	Boss
Geek	Snake
Gimix	A tool
Go and get it	Meal being served (Note variation from army and cattle range, "Come and get it")
Grab hair, To	To show that one is an inexperienced rider
Grifter	Confidence man, pickpocket, or short-change artist
Haul	Distance from railroad siding to lot
High-school horse	Performing horse



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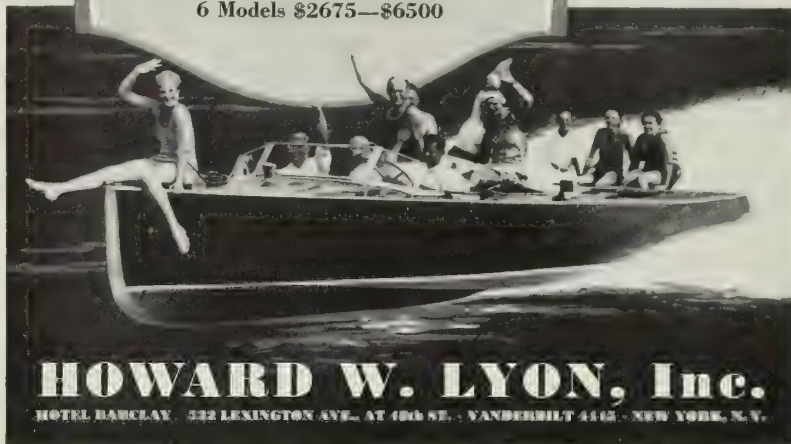
Everywhere—universally—Sea Lyon's perfect performance—Sea Lyon's complete supremacy—are consistently accepted facts.

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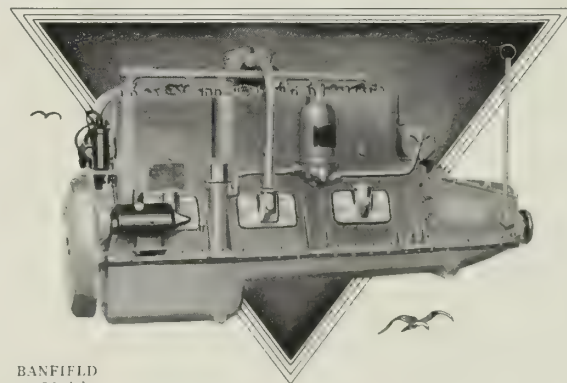
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Good night

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CARL M. SNYDER

MANAGING DIRECTOR

Appendix—Continued

Hitch	Number of horses, e.g., a "twenty hitch" is twenty horses
Hold leather, To	(See <i>Grab hair</i>)
Hump	Camel
Joey	Clown (from Joe Grimaldi)
Jig show	Concert
Kid top	Side show tent
Kinker	Acrobat
Keester (or turkey)	Suitcase
Middle piece	Vest
Mush (also round top or shower stick)	Umbrella
Old folks	Monkeys
Pad	Fancy (but not bareback) rider
Patsy	Failure, flop
Pinhead	Negro freak
Possum gravy	Transition from one band selection to another
Punk	Young animal
Rattler	Train
Razorbacks	Crew which unloads the trains
Resinback	Bareback horse
Run	Distance from town to town
Sawbuck	Ten dollar bill
Spotted girls	Giraffes
Turnaway	Sold-out performance
Up in your lap	To rouse an audience's enthusiasm
Wet tops	Rainy weather

Note on German oil

The current development in German oil is being fostered largely by the North European Oil Corporation, although the Anglo-Persian Oil Company is also in the field. Organized by Pettigrew and Meyer, Inc., Manhattan bankers and operators in oil securities, the North European Oil Corporation has leased 1,600,000 acres in the North German Plain, the cities of Hamburg, Bremen, and Hanover forming a triangle in the approximate center of the area. Mr. Chester Narramore, formerly chief of the petroleum division of the United States Bureau of Mines, is president of North European Oil Corporation, and Dr. A. C. Veatch of New York City is consulting geologist. Mr. Henry Doherty's Cities Service Company has taken an option on 51 per cent of the stock of North European Oil Corporation, and Cities Service engineers are at present in Germany examining the leased sites.

Geologists have for many years regarded the possibility of large scale German oil production as unlikely, and Germany has always imported, and still imports, nearly all its petroleum products. On the other hand, it is undeniable that Germany has been producing oil, on a small scale, since 1859 (the same year that the first oil well was drilled in this country), and that there certainly is some petroleum in Germany's petroliferous acreage. The question would appear to be whether there is enough German oil to make Germany an important producer.

The North European Oil Corporation and others interested in the German development point out that the geologic formations are identical with those of the Mid-Continent and Gulf Coastal oil fields of the United States. More specifically, these formations include the buried salt domes which (found also in Texas and Louisiana) remain as evidences of those dried-up bodies of salt water so closely associated (see *Prospecting*) with petroleum deposits. The Germans themselves have explored some of these salt domes, but from the standpoint of mining potash, not from the standpoint of locating petroleum. They have therefore drilled only near the surface, seldom, until recently, below one thousand feet, and such oil wells as they have attempted to work have been shallow holes, clumsily drilled and inefficiently operated. Even in the United States it is only within the last few years that deep drilling has become common, so that there is some reason for discounting Germany's pre-War failure to produce petroleum in considerable amounts. Wartime Germany was of course too busy with fighting to do much drilling and a post-War German oil boom collapsed when the mark sank to the fantastically low values of its devaluation period. Hugo Stinnes had a hand in the boom, and at one time nearly a quarter of the stocks traded in at the German *börse* were oil stocks.

The Beginning of Steel Desk Standardization

Four years ago orders went into our designing and experimental departments which read "Regardless of cost, produce a steel desk that has beauty—convenience—and strength."

Two years later the desk made its appearance. It *was* beautiful. As for convenience, why just to sit with it made one feel at home. Of course, we knew from the materials used and methods of construction it had to be strong.

The atmosphere was alive with enthusiasm until the production manager said "The cost of production is prohibitive unless you can give me volume."

Then someone replied, "Make that desk in the various styles and sizes to meet present and future requirements, and all American business must give you that volume because of superior quality and value."

The plan was adopted. At that moment a Standardized Steel Desk was born.

The trade name All American naturally followed, and the *Browne-Morse Company* of Muskegon, Michigan is making this complete line as well as a line of All American Steel Filing Cabinets, Storage Cabinets and Filing Supplies.

Our booklet "Standardization in the Manufacture and Distribution of Steel Office Furniture" is really an interesting industrial story. May we send a copy to you?

To the EXECUTIVES Of the United States...

who either have their offices in New York City or intend making it their headquarters in the near future.

In making a final decision as to a permanent home, there are several points you should consider. The ease and speed of transportation—the community and its surroundings—the better schools and shops near at hand—the pleasures and sports offered, and the restrictions in force that will protect your home from unpleasant encroachments in the years to come.

Chilmark Park offers all of these, as well as many other important suburban advantages.

This residential park of exceptional beauty is part of a famous estate overlooking the Hudson, only 47 minutes from Grand Central Station. Its landscaped driveways winding through the hills (completely improved with water, sewer, gas and electricity), offer building sites of rare charm and individuality.

A Community Club House for the residents of the Park has recently been completed, with club rooms, bowling alleys, squash courts and locker rooms; also a large outdoor swimming pool, tennis courts and several holes of golf.



This house in the English style, of stone and stucco construction, has just been completed and ready for occupancy.

An attractive English Home recently built by its owner.



Present Offerings—Four 8 and 10 room stucco and half-timbered homes, with private garages, on approximately 1/2 acre plots, completely landscaped and ready for immediate occupancy. Three homes now under construction and two planned for. Also a few exceptionally choice residential sites.

Chilmark Park is carefully restricted and reserves the privilege of selecting its clientele.

Write, phone or come and see this beautiful community of better homes.

Arthur M. Holbrook, Broker,
or your own broker is protected.

Chilmark Park REALTY CORPORATION

SCARBOROUGH-ON-HUDSON
Ossining, N. Y.

TELEPHONE
Ossining 1083



A rambling English cottage of stucco, half-timber and brick, nearing completion and ready for inspection.

A Brick Colonial Home recently completed for the purchaser.



The GLEN SPRINGS



the only resort in America where the famous Nauheim treatments for the heart are given with a natural calcium chloride brine—as at Bad Nauheim itself. Address MR. WM. M. LEFFINGWELL, President, The Glen Springs, Watkins Glen, N.Y.

THE AMERICAN NAUHEIM

An "Island Kingdom" for Sale

off Atlantic Coast
16 miles from



Charleston, S. C.

Individually-owned domain of type so alluringly featured in February "Fortune"

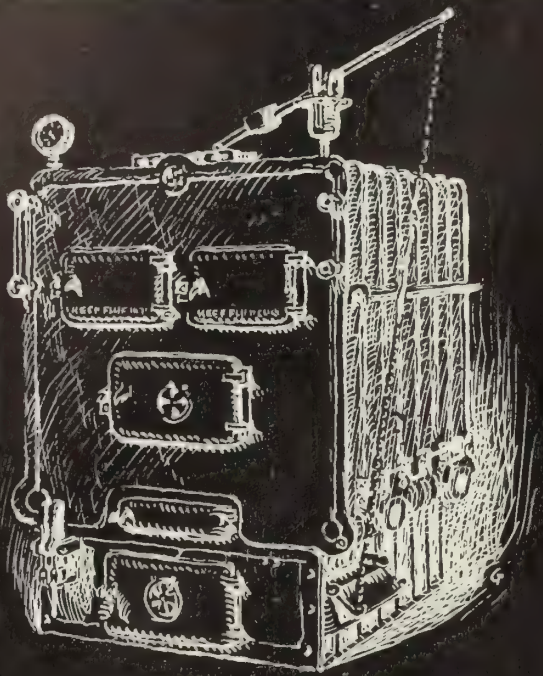
Approximately 2 1/2 x 1 1/4 miles in extent; mainly in charming natural state; fairly level, varied by dunes and fresh water ponds, and luxuriantly wooded with semi-tropical vegetation. A magnificent hard sand beach extends full length of the Ocean side. Inner side bounds the great Inland Waterway. About 1/2 hour from Charleston by speedboat. Nearest point on mainland 3 miles distant; convenient to Coastal Highway. Island abounds in wild duck, shore birds, deer and many other species of game; the waters in a great variety of fish.

Improvements, all recently installed, include bungalow lodge, fully furnished, with living and dining room 25' square, 7 bedrooms, 3 baths, gun room, 9 open fireplaces; electric plant, artesian water supply; 2 staff cottages and many miles of walks and bridle paths cut through the dense growth.



Kenneth Ives
& Co.

17 East 42nd Street
New York



The Long and Short of It Means Fuel Thrift

The Burnham's long
fire travel makes its
short coal bill. And
we can prove it.
Want the proofs?

P. S.—

Send for "Letters To and Fro." It
tells of eight peoples' successful so-
lution of eight separate home heat-
ing problems. Send for it.

Burnham Boiler Corporation

IRVINGTON, NEW YORK

Representatives in principal cities of United States and Canada

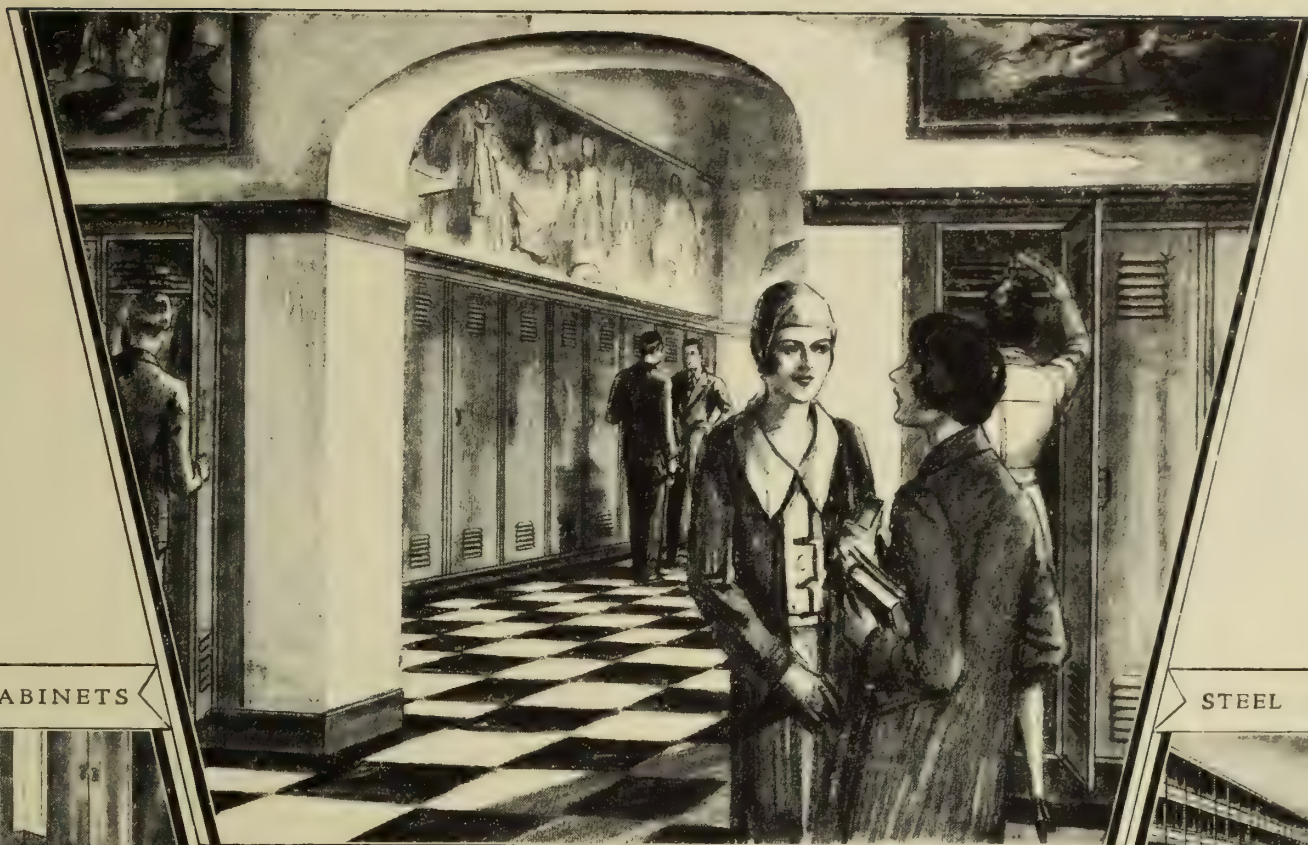
Arguing, therefore, that the presence of oil in Germany is an established fact, and that if some oil can be drawn from shallow holes, casually oper-
ated, those now interested in German petroleum are confident that the
application of American drilling methods will result in substantial pro-
duction. The speculative aspects of the enterprise are sufficiently obvious,
and the North European Oil Corporation has thus far been a leasing rather
than a drilling operation. But it is certainly true that Germany represents
a petroleum surface that has hardly been scratched and that the only way
to get petroleum buried six thousand or seven thousand or eight thousand
feet below the surface is to go down six or seven or eight thousand feet after
it.

The present German government is coöperating enthusiastically with
the movement toward petroleum development, has supplied oilmen with
official geological maps, and has been of the utmost assistance in the se-
curing of legal and guaranteed leases. Such coöperation is, of course, not
to be wondered at. Here, perhaps, is wealth for the young German Re-
public such as the old German Empire never dreamed of. Here are new
riches for the impoverished Fatherland. Enthusiasts are already predicting
a German oil boom comparable to the oil booms such as have successively
greeted the development of each new oil-bearing section in this country.
Such a development, if well founded, would obviously go a long way to-
ward the payment of reparations, would remain as a permanent and sub-
stantial addition to Germany's national wealth.

Note on Venner

A partial list of companies whose transactions Mr. Venner has attacked:

1886	Atchison, Topeka & Santa Fe Railroad Co.
1893	American Water Works Co.
1894	Continental Trust Co.
1898	Union Pacific Railroad Co.
1899 }	Farmers Loan & Trust Co.
1900 }	
1905 }	
1899	Central Trust Co. of New York
1900	Pullman's Palace Car Co.
1901	Amalgamated Copper Co.
1902	United States Steel Corp.
1903	Chicago, Rock Island & Pacific Railway Co.
1904	Northern Securities Co.
1906	Wabash Railroad Co.
1906	New York Life Insurance Co.
1907	Great Northern Railway Co.
1908 }	Interborough Rapid Transit Co. (5 suits)
1910 }	
1921 }	
1908 }	Chicago City Railway Co.
1910 }	
1913 }	
1913	Southern Railway Co.
1914	New York Central & Hudson River Railroad Co.
1914 }	
1915 }	New York Central Railroad Co.
1916 }	
1919 }	
1915	Rock Island Railroad Co.
1915	Lake Shore Railroad Co.
1916	Erie Railroad Co.
1916	Pennsylvania Steel Co. of New Jersey
1916 }	
1917 }	Bethlehem Steel Corp.
1918 }	
1918	American Telephone & Telegraph Co.
1920 }	Southern Pacific Co.
1922 }	
1921	Guaranty Trust Co. of New York
1924	Cleveland, Cincinnati, Chicago & St. Louis Railway Co.
1925	American Hide & Leather Co.
1925	Borden Co.
1928	General Baking Co.



STEEL CABINETS

STEEL SHELVING

LOCKERS RECESSED FOR TRIMNESS AND SPACE SAVING



Where else can we cut costs?

In department after department, American business men are constantly seeking to lower costs. Buying is on a more scientific basis than ever before. Manufacturing methods, sales and advertising are now geared to the disposal of mass production goods. . . . Where else, then, can economies be found? Have you considered the full possibilities for cutting costs and for sales increases in the storing, handling and displaying of goods? These costs, a large factor in any manufacturing enterprise, become of even greater



RETAIL STORE EQUIPMENT

importance in wholesaling and retailing. . . . To manufacturers and distributors Lyon brings the accumulated experience gained through thirty years'

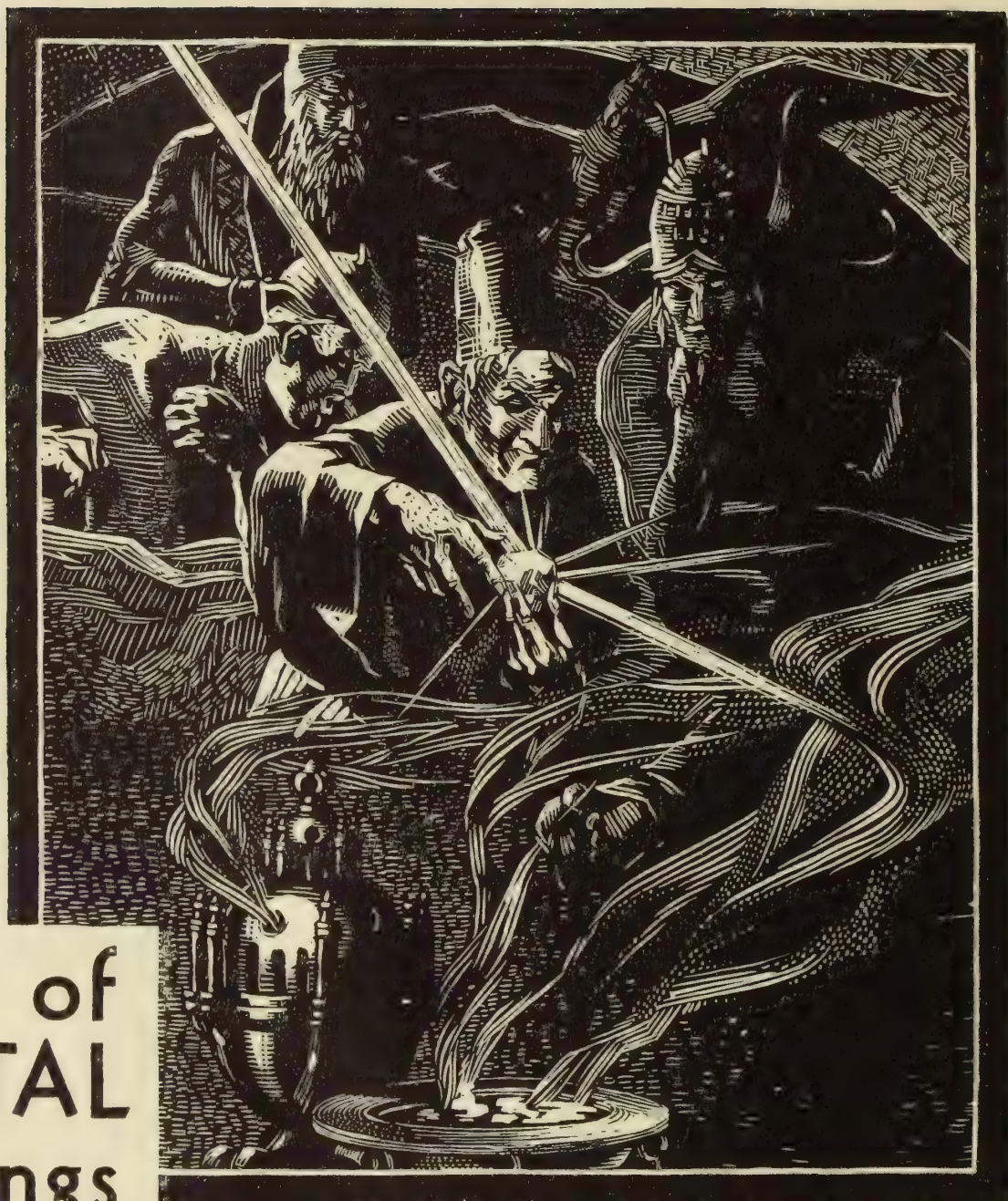
study of storage and display problems, and a complete line of steel equipment that saves time, space, and money. . . .

Whether you need steel shelving for your stockroom, lockers for your employees, storage or wardrobe cabinet for general or private office, or complete display equipment for your retail store, you will find the help of Lyon representatives of real value, and the service of Lyon factories absolutely dependable. Write us about your specific requirements.

LYON METAL PRODUCTS, INCORPORATED
AURORA, ILLINOIS

LYON

STEEL STORAGE *and* DISPLAY EQUIPMENT



The MAGIC of the CRYSTAL brings Greater Accuracy to Industry

Product of ancient times, the Crystal was thought to have magic powers. In no other way could its discoverers explain the strange new world thus opened to their dazzled eyes.

Product of modern times, Crystal Windows of optical glass still open upon magic worlds. Through application of the principles of optics, the circle of man's knowledge is constantly being widened . . . new fields explored . . . new standards set.

As America's Leading Optical Institution, Bausch & Lomb brings new aids to industry. No longer is the unaided human eye the judge of what constitutes accuracy. Bausch & Lomb scientific instruments replace guesswork with a new precision, bringing standardization of product that cannot help but build prestige for the manufacturer.

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New York » » Chicago » » San Francisco » » Frankfurt a/M » » London



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Microscopes, Colorimeters,
Refractometers, Polariscopes,
Saccharimeters, Magnifiers,
Metallographic Apparatus,
Photomicrographic Equipment,
Contour Measuring Projectors,
Optical Measuring Devices, etc.

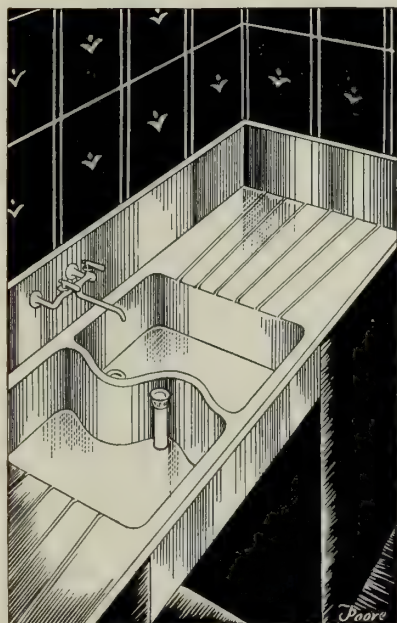
Also manufacturers of

ORTHOGON
Eyeglass Lenses for Better Vision

BAUSCH & LOMB



Some peoples' servants stay



—and other people are constantly interviewing new maids and butlers. An Elkay Butler's Pantry Sink does more than make contented servants. It brings you no end of satisfaction by making your service more prompt and efficient and inspiring more tempting dishes. It is worth while to learn the details by writing for a copy of "Butler's Pantry Sinks by Elkay."

ELKAY

4707-4717 Arthington Street
Chicago, Illinois



Salesmen's Compensation

A helpful study of this subject will be sent to interested executives. Selling Costs, Sales Quotas, Expense Budgets, Application of Expense to Products, and Basing Pay on Profits are among points discussed.

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KANSAS CITY

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SAN FRANCISCO



A Personal Invitation to Hotel Hollenden

I TAKE pleasure in extending to the readers of "Fortune" a most cordial personal invitation to make The Hotel Hollenden their home when in Cleveland. Located in the heart of Cleveland's business and financial district, The Hollenden, one of the distinguished hotels of the country, offers in grateful combination, homelike comfort, luxurious surroundings, an unexcelled cuisine and an atmosphere of smartness and reasonable and uniform rates.

The famous Crystal Dining Room is a brilliant and delightful place to dine. In the "Show Boat" you will find "a supper restaurant that is totally different" and music by Emerson Gill and his "Show Boat" orchestra.

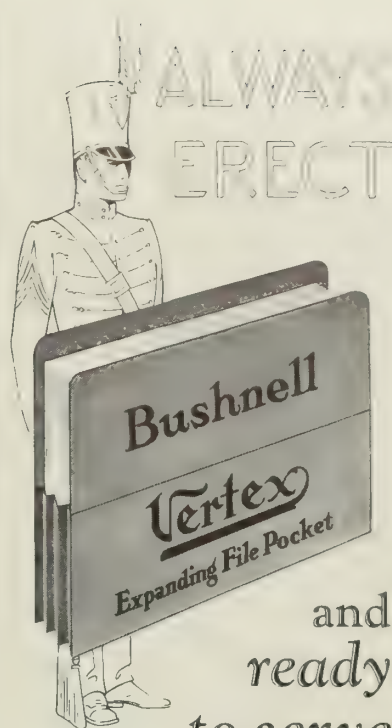
The Hollenden Coffee Shop is modern to the last word, with fast counter and table service for the busy man and woman.

Sincerely yours,

Theo. De Witt
Vice Pres. & Gen. Mgr.

In Cleveland - it's The
HOLLENDEN

THEO. DE WITT,
Vice Pres. and Gen. Mgr.



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That Precious, Record-breaking Flyer

If it were possible for Modern Accountancy to check up *Time lost* in any single industry; and to value that Time on the basis of Time profitably employed, the result would mean... *What wouldn't it mean?*

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Modern Accountancy performs no magic with Time. It works only with the cold, hard facts and figures. But it works in the light of the needs of industry *today*—a light which reveals, perhaps more clearly than anything else, *the value of Time!*

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Ah! A BIRD SANCTUARY

Birds add untold interest and pleasure to any grounds or estate. Learn how to attract only beneficial song birds who thank you not only with cheery songs, but by destroying harmful insects, moths and mosquitoes. A Martin colony, for instance, will keep your premises free from mosquitoes and other flying insect pests.

JOSEPH H. DODSON, America's foremost bird authority, has supervised the building of bird sanctuaries for prominent people like Henry Ford, John D. Rockefeller, Thomas Edison, Harvey Firestone, Drs. Mayo and others as well as country clubs such as Westchester Biltmore, Olympia Fields, Onwentsia, etc.

He will be glad to hear from any home owner interested in helping preserve America's song birds and to confer personally regarding the construction of a sanctuary or the proper location of bird houses on your property. Even a small garden can be made a haven for our beautiful birds. Write Mr. Dodson today as you should have your houses ready for the birds when they come with the first warm spring days.



Joseph H. Dodson

JOSEPH H. DODSON, INC.
239 Harrison St., Kankakee, Ill.
"Bird Lodge"
A Book Will Be Sent to Those Interested—
"Your Bird Friends and How to Win Them."

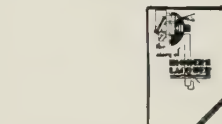
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Enter my Subscription for FORTUNE for one year and send me a bill for \$10.

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New uses are constantly discovered for nitrocellulose lacquer. It dries so quickly that it is saving fortunes in time and storage space. It forms a tough film that is highly resistant to abrasion. This durable, protective film is waterproof and can be readily cleaned. It is applicable to wood, metal, plaster, textiles, and other surfaces. Containers are sealed with it, and the attractiveness of many articles is enhanced by its beautiful colors. Please write us for a booklet, "The Story of Modern Lacquer," and consult the firm that makes your finishing materials. Nitrocellulose lacquer is sold by the paint, varnish, and lacquer manufacturers. >

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Nitrocellulose Explosives
Cotton Cellulose Naval Stores

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THE best way to develop coöperation between employer and employee is through Group Insurance, based on the coöperative effort and cost-sharing of both.

Today there are more than 6 Million lives protected by approximately 9 Billion dollars in Group Insurance.

If you have not yet solved your employee problem the Group Insurance way, you will find our booklet, "Management, Men and Motives," of interest. We shall be glad to send you a copy.

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LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS

FR. Over Sixty-seven Years in Business

Buildings

still in Blue-Print may be **OBSOLETE**

UNLESS THEY PLAN TO MANUFACTURE THEIR OWN WEATHER

"WHY are they pulling that handsome building down?" you've heard passers-by ask. "Every year buildings are wrecked that were made to last much longer."

The answer is "obsolete."

The space will not rent at a profit. The building is not "modern." Some of these buildings become obsolete sooner than others because they cannot offer the comfort, the efficiency, the value that tenants have learned to expect.

Manufactured Weather will change this. It will make any building outstanding while new. It will prolong the time during which the building will command profitable rentals and hold desirable tenants.

Manufactured Weather brings within four walls the weather that nature makes only on those rare, perfect days that poets sing about.

Outdoors the weather may climb to the humid nineties . . . yet indoors it can be cool and free of uncomfortable humidity.

Outdoors it may be Arctic cold . . . yet indoors properly humidified, warmed air is circulated, bringing new winter comfort. All air is washed clean of outdoor impurities. Windows need never be opened for

ventilation. Street noises and dirt are kept out. The most remote inside space will be as comfortable as the president's corner. Leading architects and engineers are now suggesting Manufactured Weather for all important buildings and advising their clients that failure to look ahead to the general use of Manufactured Weather as standard practice is certain to contribute to an early obsolescence.

The Brookmire Economic Service in a recent bulletin says, ". . . New developments which will tend to make old buildings obsolete . . . include improvements in building equipment, such as air conditioning and year-round temperature control."

More and more, Manufactured Weather is being adopted for both old and new buildings.

Congress has it; Macy's in New York has it; a dozen other famous department stores have it too.

Hundreds of factories have it. Sheer manufacturing economy has dictated that indoor air conditions must be constant and controllable.

If you would like to know more about Manufactured Weather for your own building or store or factory, ask us to send you an engineer who will discuss your individual requirements without obligation to you.

There is only one Manufactured Weather. It is the product of Willis H. Carrier and his associates.

Carrier Engineering Corporation

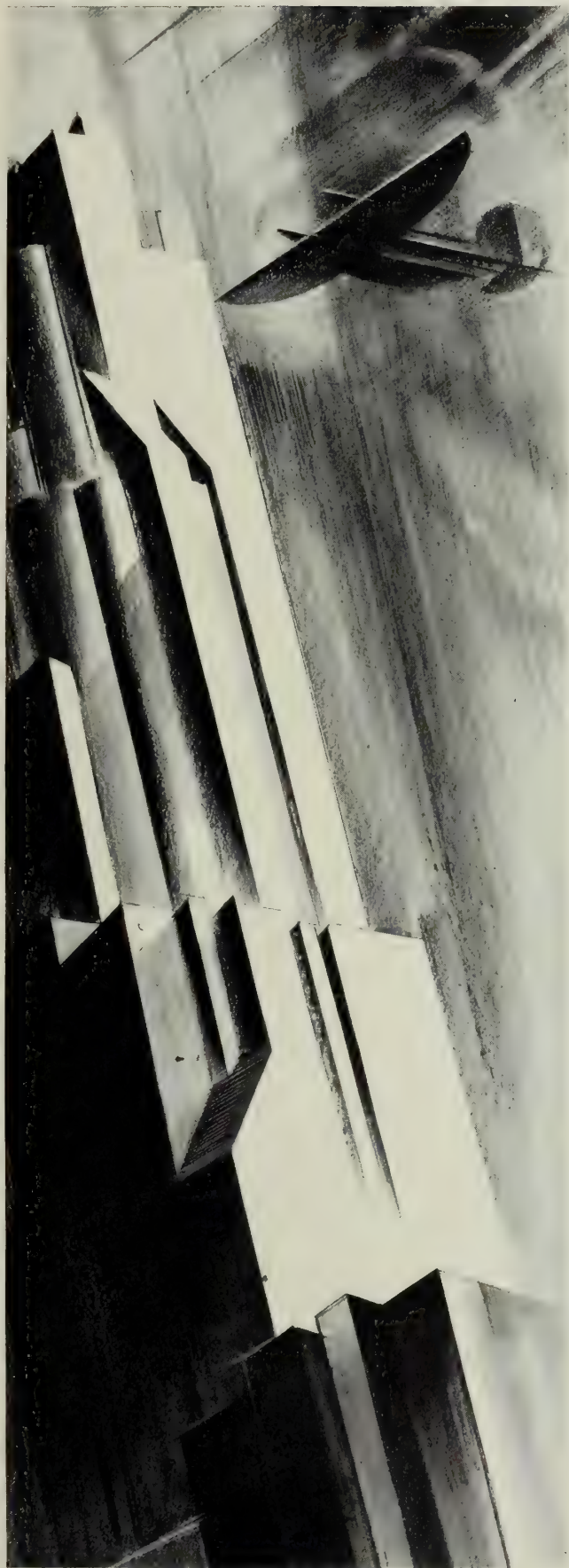
NEWARK, NEW JERSEY

OFFICES: NEW YORK . PHILADELPHIA . BOSTON . CHICAGO . CLEVELAND
WASHINGTON . DETROIT . KANSAS CITY . DALLAS . LOS ANGELES

Manufactured Weather *makes* "Every day a good day"

CARRIER ENGINEERING COMPANY, LTD
LONDON, PARIS, BOMBAY, CALCUTTA
JOHANNESBURG

CARRIER LUFTTECHNISCHE GESELLSCHAFT
STUTTGART, BERLIN





Unexpected Visitors Crashing in from the Skies

Something to think about! . . . While the safety factor is constantly becoming greater, the fact cannot be ignored that wherever machines are flying, there is the ever-present danger of a plane crashing into your home or your business property. A new CENTRAL Aircraft Policy is designed especially to protect property-owners against loss from crash or fire damage resulting from such an accident.

Since its founding in 1876—over half a century ago—CENTRAL has always enjoyed a reputation for conscientious service, fair adjustments and prompt payment of losses. Its stability is unquestioned; policies absolutely safe. It is a conservatively-managed mutual company, returning a dividend which for the last nine years has represented an actual saving to policy-holders, of 30% in insurance cost.

Significant Figures from Financial Statement of January 1, 1930

Total insurance in force	\$395,247,955.00
Total assets	4,184,607.00
Cash surplus	1,951,815.00
Losses paid in 1929	1,143,694.00
Losses paid from organization to January 1, 1930	13,676,710.00
Dividends paid in 1929	826,001.00
Dividends paid from organization to January 1, 1930	6,856,196.00

"An old line, legal reserve, dividend paying mutual fire company."

For Fire, Automobile, Tornado or Aircraft Insurance, CENTRAL policies command the interest of every careful buyer of insurance protection. All policies written through local CENTRAL agents. There is probably one in your territory. Full information, with name of nearest representative, on request.

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1876

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MAY 1930

Ten Dollars a Year



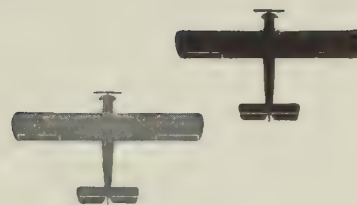


ILLUSTRATED IS THE 5-PASSENGER 16-FOOT RUNABOUT • 40 H.P. MOTOR • SPEED 25 MILES AN HOUR PRICE, FULLY EQUIPPED, \$945

STORIED waters of many lands have purled a welcome to the new Dodge Boats • • • Pictured here is England's River Thames—famous in fact and fable • • • Only the miracle of modern mass production could create these new Dodge Boats at such amazingly lessened prices • • • At \$945 the new Dodge Sixteen Footer alone begins a new epic in boating history • • • With mahogany planking from stem to stern • • • bottoms double planked • • • this gem of marine beauty is fully equipped from luxurious upholstery to electric starting and lighting • • • with a 40 horsepower motor ready to speed away from dock or mooring at twenty-five miles an hour • • • It is merely one illustration of the striking values in the entire series of new Dodge Boats including • • • the 35-miles-an-hour Twenty-one Footer at \$2100 • • • the 38-miles-an-hour Twenty-five Footer at \$3200 • • • and the 300 horsepower Twenty-eight Footer with its better than 45 miles an hour at \$4500 • • • Victoria Sedans at \$3900 to \$5300 • • • Write for a complete color catalog with descriptions of all Dodge Boats.

DODGE BOATS

HORACE E. DODGE BOAT & PLANE CORPORATION. WORKS: NEWPORT NEWS, VA. GENERAL SALES DEPARTMENT: 21 W. 46th ST., N. Y. C.



When Success depended on Speed, the early Robin got the contract!



A big industrial piping project near Detroit... bids closing in a few hours. Engineers and estimators in Boston working overtime... at top speed... for the bid was being prepared on short notice.

Neither by train nor auto could it be delivered within hours of the time limit set. But the R. H. Baker Supply Company had at hand an instant and reliable means of transportation... their Curtiss Robin.

There was more to the Baker bid than just price and materials. Here was an organization so progressive that they made the swiftest of all modern transportation serve them. To the customers this presaged up-to-the-minute service and close cooperation. With their Robin, the R. H. Baker Supply Company won that contract against all competitors.

In many ways does this Robin serve its owners. It has carried Mr. Baker and his associates more than 25,000 miles in three months. It has narrowed a week's inspection of instal-

lations to three days. It has delivered important repair parts and materials—sometimes 500 lbs. in weight—to manufacturing plants that were losing \$1000 an hour through forced shutdown.

The Robin is particularly adapted to private and corporation use. It makes old schedules of time and mileage obsolete. It puts Boston within two hours of New York—Los Angeles only four hours distant from San Francisco. Its speed sets new and greater profit standards for sales and supervision, delivery and travel.

Powerful engines, sturdy construction, inherent stability and traveling comfort are combined

in the Curtiss Robin to make business necessity an actual pleasure. The Robin is available in three or four passenger capacities. It is powered, at your option, with engines of from 80 to 180 h. p., permitting cruising speeds of 85 to 100 m. p. h., and a range of from 440 to 550 miles.

A card or letter will bring you full details about the Curtiss Robin, its first cost, operating and maintenance costs. Also the name and address of the nearest Curtiss-Wright dealer, where you can see the Robin, ride in it, and convince yourself of the part it will play in increasing the profits of your business. Write Dept. R-1.



President R. H. Baker, and Salesman-Pilot H. S. Oberting, place a premium on time—and fly.

CURTISS-ROBERTSON AIRPLANE MFG. CO.
Division of CURTISS-WRIGHT
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CURTISS ROBIN

For Business • Pleasure • Instruction





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Interesting examples of the fine Jewelry and Silver shown by Spaulding-Gorham.

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THE WEST, MEN SAY, IS BUILDING UP ANOTHER GREAT NEW YORK

DESTINY IS RAISING SAN FRANCISCO TO A BRILLIANT PLACE!

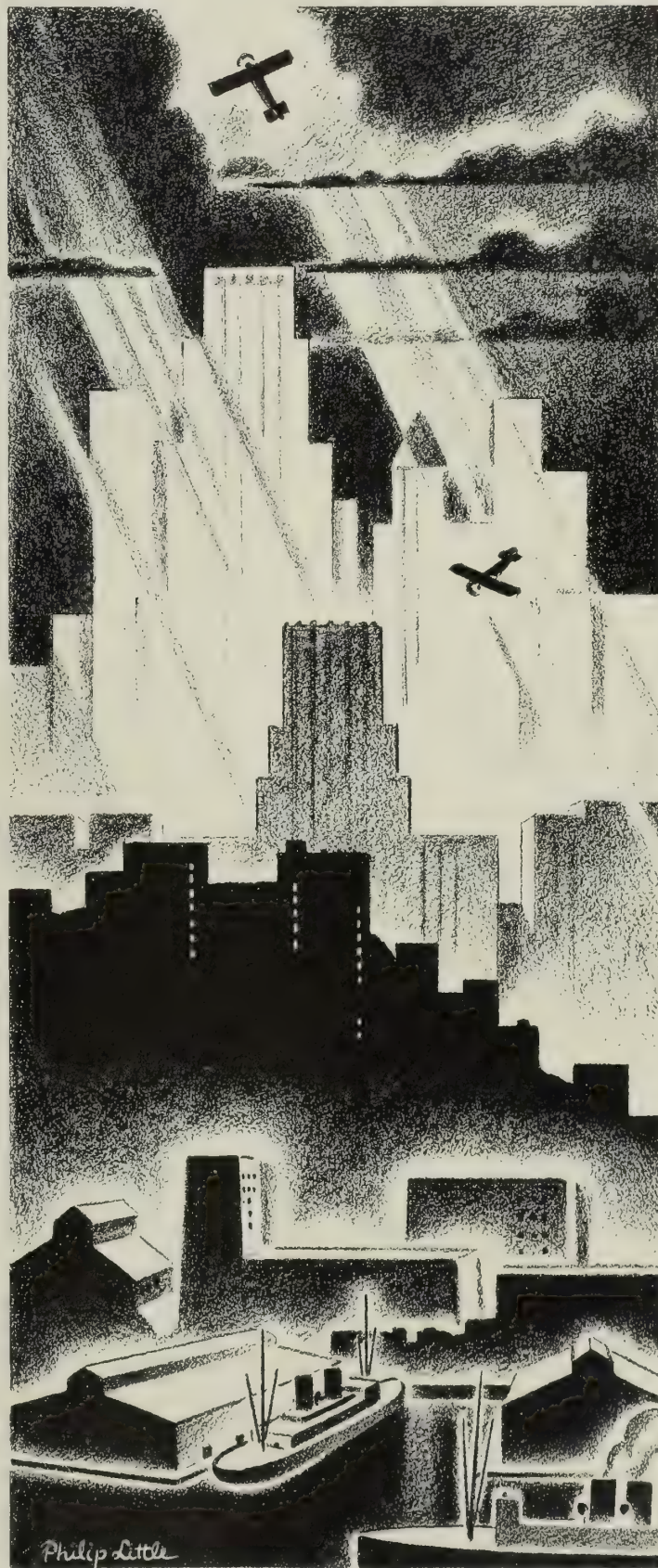
The very destiny that raised New York above the other cities of the world—the destiny that is made by men with things to sell—has singled out this city by the *Golden Gate* . . .

In the center of the whole Pacific Coast, headquarters of the West we know today, San Francisco's coming dominance will extend across the sea!

900,000,000 people in the lands around the Pacific are coming to appreciate the countless things that modern manufacture means . . . 900,000,000 people many of whom have never worn a shoe . . .

In the years just past the world's attention was turned logically to Europe. But now this newer, most potential *Pacific* market shows unmistakable signs of widespread enterprise. Traditionally the gateway to the nearly-billion people along the Pacific shore, San Francisco is in a position to know exactly what is going on. And San Francisco is making ready for the role she is to play.

There will be many claims to leadership before the great Pacific Era hits its stride, but men who know the facts that underlie the issue say San Francisco's place is most strategically secured. Today it is headquarters for the



SAN FRANCISCO
IN CALIFORNIA—"WHERE LIFE IS BETTER"

leading financial, commercial, manufacturing and transportation interests in the west. San Francisco Bay is second only to New York in value of water-borne tonnage. The steamships of 118 lines dock beneath its famous hills; and three transcontinental railroads compete to serve it best. An even, temperate climate holds labor to its highest productivity. Economical electricity, oil and natural gas are further aids to industry; and surely, this region's wealth of natural resources needs no description here.

Half the people of California live within a radius of one hundred and fifty miles, while 11,000,000 people who live west of the Rocky Mountains can be served most quickly and cheaply from San Francisco—added reason for this city's present place.

The old romantic lure that has brought thousands to visit, and back again to live, becomes an ever more enticing thing. San Francisco offers able men tremendous opportunity!

Why not come out this summer? Vacation in the varied outdoor land that San Francisco centers—and see this city for yourself. Californians Inc., 703 Market St., San Francisco, will be glad to send you two vastly interesting, free, illustrated books: "California Vacations" and "Why Manufacturers Choose San Francisco". Address Department 2205.



HOW A ONE CENT POSTCARD SEATED 50 MEN AT A TABLE 25 FEET LONG

Several years ago we received a postcard from the Secretary of the Chamber of Commerce in Washington, asking for a representative to present sketches and prices of Danersk Furniture.

Two of our men went down to Washington and found an interesting problem. To create, for a 40 ft. x 20 ft. room, a table capable of seating 50 people in such a manner that all could see the President and that each man, by turning his head just a trifle, could command a clear view of anyone speaking. We made at least 12 studies of the layout of the board room before we at last solved the problem and designed a table in the form of a horse-shoe.

We should be glad to study the needs of

your office with the same interest, no matter whether it be a small, single room or a large suite of chambers.

You will, we believe, find it equally worthwhile to express, in appropriate Danersk Furniture, the sincerity of your business ideals and the thoughtfulness of your methods.

Danersk Furniture is built by hand by Scotch and English cabinetmakers. And yet, because you are dealing direct with the maker, you may purchase these interesting pieces at no greater cost than furniture less carefully produced.

You are cordially invited to inspect the displays at our showrooms and to write for our informative brochure "The Livable Office."

DANERSK FURNITURE

ERSKINE-DANFORTH CORPORATION, *Designers and makers of choice furniture.* NEW YORK: 383 Madison Avenue. CHICAGO: 620 North Michigan Avenue. CLEVELAND: 11129 Euclid Avenue. *Distributors:* BOSTON: 132 Newbury Street. LOS ANGELES: 2869 West 7th Street



S U P R E M A C Y

WITH sinewy strength; with unbelievable endurance; with sure-footed tread—the New Firestone Supreme Balloon is comparable to no other tire. Like the Lion, it is dominant in its domain. Under the multi-angled, extra-thick safety tread of toughest rubber known is the patented Firestone Gum-Dipped construction . . . Gum-Dipped cords, each in its own bed of pure live rubber . . . Rugged—Strong—Safe—a tire of character and personality to match the finest car. Firestone Gum-Dipped Tires hold all world records for safety, economy, endurance and long mileage. † The New Firestone Supreme Balloon is the choice of discriminating motorists everywhere. Let the Firestone Dealer equip your car now.



Firestone Supreme Balloon

Listen to the "Voice of Firestone" every Monday night
broadcast through fifty stations N. B. C. Network.

1855 · SEVENTY-FIFTH ANNIVERSARY · 1930



AROUND a center of interest, the effective bathroom interior is planned, just as is a living room interior. Here an unusually interesting effect is obtained by placing the citrus yellow *Norwich* lavatory beneath a window, with the mirror framed by the window itself. An alcove holds the *Corwith* bath and shower. The closet is the new square base *Santon*. The charm of this room is the result of skill

in arrangement and decoration and the inherent beauty of Crane fixtures, not of higher cost. All the materials are reasonably priced. . . . Further to put such beauty and comfort in reach of everyone, the Crane Budget Plan is now offered. Under it, you can have any Crane materials fully installed, and pay in small monthly sums. For installation under this Plan, see a Crane Qualified Contractor-Dealer.

Valves



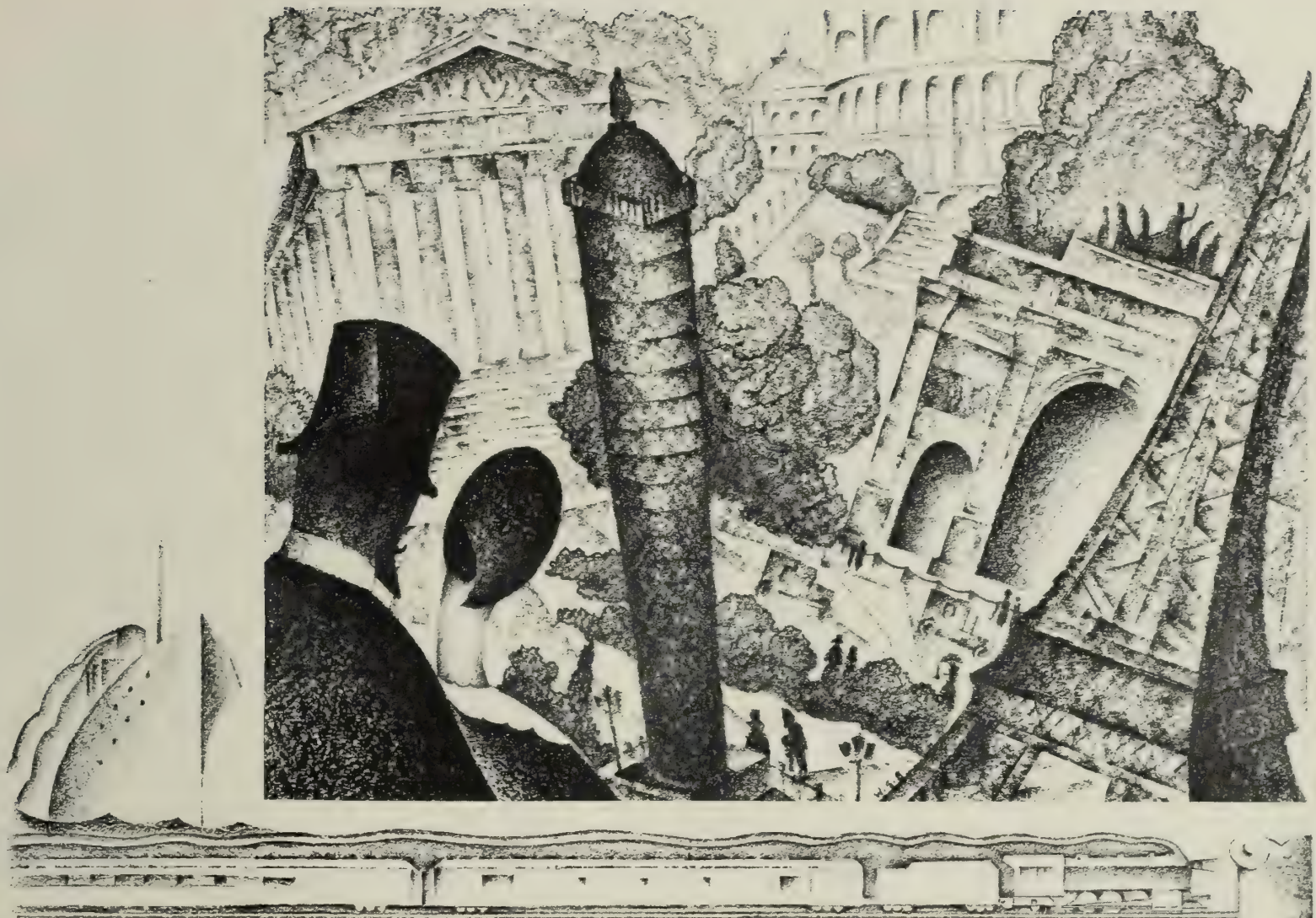
CRANE



Fittings

FIXTURES, VALVES, FITTINGS, AND PIPING, FOR DOMESTIC AND INDUSTRIAL USE

Crane Co., General Offices: 836 S. Michigan Ave., Chicago • 23 W. 44th St., New York • Branches and sales offices in one hundred and ninety cities



Transplanting Paris

At a famous numero of the rue de la Paix, appraising eyes review passing creations . . . Somewhere on the rue St. Honoré a man who has bought millions of gloves for us selects several of the better new styles . . . One shrewd young man knows where to go in Paris for marvelous costume jewelry; another for hosiery more sheer than shadows; another for tapestries that few may own but none fail to admire. • These are some of Marshall Field and Company's large staff of resident representatives in Paris. In addition, scores of men and women from Field's in Chicago visit Paris periodically. Alert, fashion-wise, their purchases reflect an intimate knowledge of Continental correctness. • You are cordially invited to come to Field's for almost anything you might like from Paris.

Marshall Field and Company

RETAIL • CHICAGO



Off the Record

Hello, World

CHAIN stores are seventy years old and violent criticism of them at least twenty years old. The critics have the oratorical advantage. They may conjure the Monster of Monopoly and the Demon of Wall Street; stoutly they may align themselves in defense of Our Schools, Our Homes, Our Sons and Daughters. Confronted by such trite but telling exaltations, the chain store defender is most often irritated but silent. If he answers, he is prosy. He must speak about mass distribution, child of mass production, efficient marketing as opposed to inefficient marketing; he must aver that chain stores displace only incompetent independent stores that are a drain on the community anyway, that the competent independents can and always will compete successfully with the chain. In other words, he has nothing to say about Our Schools or Our Sons and Daughters—or, at the most, very little. This fact depresses him somewhat, because he well knows that oratorical advantages have their advantage.

The latest and most colorful individual to make use of this advantage is William Kennon Henderson of Shreveport, Louisiana, and it is his fond hope and a fair possibility that his daily diatribes against the chain store systems may or doom or greatly retard their progress, if not actually affect their present prosperity. Mr. Henderson's weapon against the chain stores is the radio. He owns and operates the Shreveport, Louisiana, station, KWKH (named after his estate Kennonwood and his daughter, Kennon Henderson, whose fairly recent marriage is said to have greatly altered his mode of living).

His entrance into the chain store hurly-burly was casual. He happened to hear an anti-chain speech and invited the speaker to broadcast it from his station which he had originally installed as a method of advertising the W. K. Henderson Iron Works and Supply Company, which has considerably contributed to his fortune. Hearing the speech a second time, Mr. Henderson became inspired and at the close of it seized the microphone and shouted, "He means that these dirty, sneakin' chain stores are comin' into your town and takin' your money and sendin' it to a bunch of crooked, no 'count loafers in Wall Street." That the message was popular was proved next day by a flurry of congratulatory letters and telegrams from KWKH listeners. Overnight Mr. Henderson became a Moses (to whom, incidentally, one of his listeners likened him) leading an unseen flock into a chain-storeless Canaan.

Mr. Henderson's radio manner is distinctly his own. His favorite gambit runs something like: "Hello, World! Dawgone Ya! Don't go 'way, now! Don't go 'way! Hello, World! Dawgone your buttons. This is Shreevepo't on the air—Shreevepo't everywhere. Don't go 'way." There follow speeches, by himself or by kinsprits, against the chain stores, a few phonograph records, and

more speeches. Mr. Henderson's frequent interspersions of "damn" and "hell" in his speeches roused the ire and eloquence of Senator Dill of Washington. Mr. Henderson answered by making puns of the Senator's name, but when the Federal Radio Commission threatened to remove his license he forswore using the words.

In a comparatively short time, Mr. Henderson's racy philippics had won him a certain fame. He now organized. The flavor of traditional oratory clings to the name he chose for the organization. It is known as the Merchants' Minute Men, and the dues are twelve dollars a year. Mr. Henderson explained that he needed money for the distribution of pamphlets and the like and that since KWKH had few advertising accounts, money was needed to operate it not at a loss. About 10,000 Merchants' Minute Men have cheerily paid their dues, so it may be presumed that the station is reasonably solvent.

Another slightly commercial facet of Mr. Henderson's crusade is his advertising and selling for one dollar the can "Hello World" coffee. Mr. Henderson admits that no coffee is worth one dollar a can, but says that people buy his out of curiosity and perhaps out of loyalty to his cause. His photograph accompanies each can.

Mr. Henderson, aside from other activities, is president of the Henderson Land, Timber and Investment Company, and vice president of the Lindsay Printing Company, which prints many of his pamphlets. He is tall, of athletic build, bespectacled, and well dressed. He voted for ex-Governor Smith and is a friend and admirer of Governor Huey P. Long. He is a member of the Shreveport Country Club, the Shreveport City Club, and the Order of Hoo Hoo.

Grateful might

HEYWOOD BROWN thought it should be called Tunney and someone else suggested the name Percival Lowell, but Evangeline Adams will tell you that the name of the new planet recently discovered by Dr. V. M. Slipher, of the Lowell Observatory, and his associates is of little importance. The planet's influence, however, will be felt as soon as astrologers learn more about its ways and habits. Its discovery, Miss Adams assures you, does not affect horoscopes cast without knowledge of its existence (she herself has cast more than a quarter million and has been, she says, about 95 per cent right).

A new planet means that a new aspect of human consciousness is developing. Astrologers will now carefully watch the new planet, and in time they will discover that it corresponds to and affects a psychic part of man. Miss Adams cannot tell, of course, but she has a sneaking suspicion that the planet will concern mechanical things and that part of the mind which develops inventions in engineering and physics. There will, perhaps, be an acceleration in this sort of thing, and marvelous new inventions will come with great rapidity. Of course, as

many people know, Uranus is the planet of science and invention, but if Miss Adams is correct some sort of adjustment between Uranus and the new planet will undoubtedly occur.

Miss Adams in private life is Mrs. Evangeline Jordan. She chose Mr. Jordan because of his horoscope. For some thirty years she has been conducting what is tantamount to a business of mass production horoscopes. She hesitates to name her living clients, but among those who have passed on she mentions the late J. P. Morgan, Seymour Cromwell, Jacob Stout, James J. Hill. Of course, she can read your horoscope whether or no you go to her, and hence she knows what days are propitious for Mr. Hoover or Mr. Coolidge though neither of these gentlemen, it appears, sent to her for a reading.

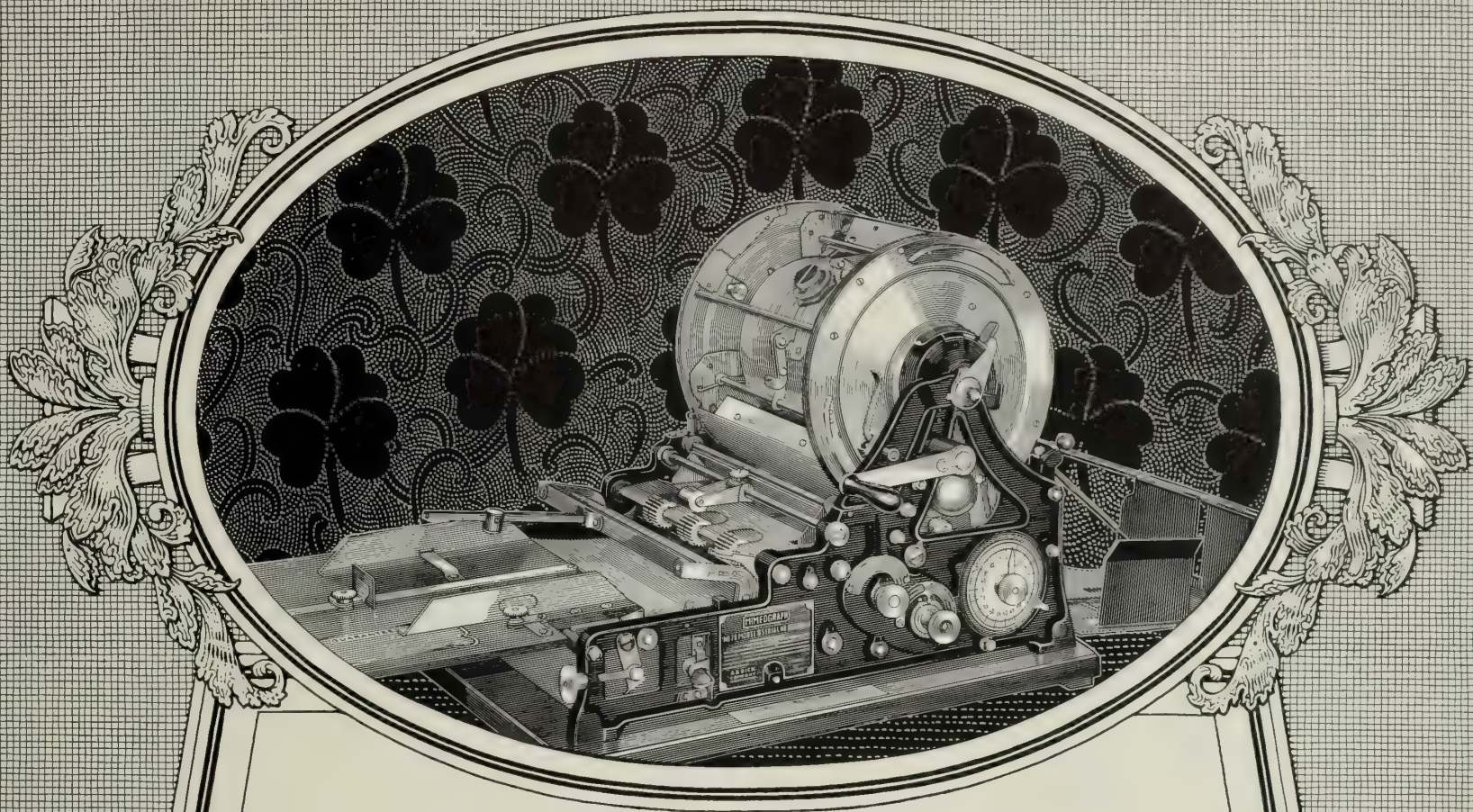
She says that she is consulted by "all big business men." "They're mighty grateful to me," she adds, "for what I did last fall. They know that if I had told even a very few of them who came to see me or telephoned all hours of the night, to withdraw their money from the biggest banks, there would have been a real disaster. Word would have gone around that I had advised this. There would have been a run on the biggest banks and they would have gone bust. No one knows, as I do, how bad the condition of the banks was then. They're mighty grateful for what I did."

Miss Adams believes that men, and especially business men, as believers in astrology, are on the increase. Hundreds of them come to her in her office in Carnegie Hall, New York, she says. And many of them buy her autobiography, *The Bowl of Heaven*, or her well-known textbook, *Astrology: Your Place in the Sun*.

Wall Street Blues

IN 1909 there was a mayoral contest in Memphis, Tennessee. There were three candidates and each, to assist and melodify his campaign, employed a colored band. Of these, one was led by an able and musical young negro called William Christopher Handy, who, the better to assist his candidate, a Mr. Crump, composed a campaigning song. It proved so popular that in a comparatively brief time everybody in Memphis was singing it and Mr. Crump was elected. Thereafter, Mr. Handy rewrote the words, and the song soon won nationwide fame and imitation as the *Memphis Blues*. The composition earned for Mr. Handy the sobriquet, "Originator of the Blues," a title not disputed, but actually upheld for him by so reliable a researcher as the *Encyclopædia Britannica*.

Other Handy songs (notably the *St. Louis Blues* and the *Beale Street Blues*) followed this initial success, and blues became definitely a part of American music. For his latest inspiration Mr. Handy deserted the South and Middle West and turned his attention to Wall Street. His song, the *Wall Street Blues*, has just been published (by himself) and deals, in rather melancholy fashion,

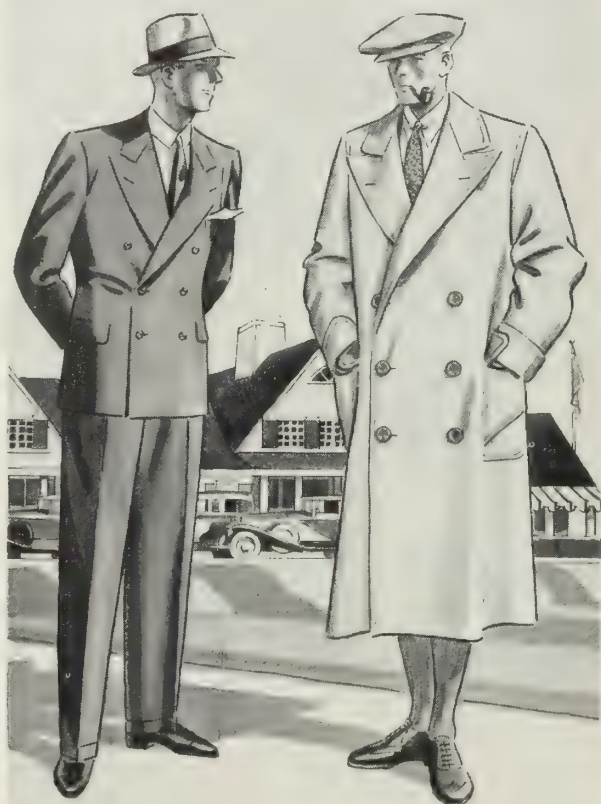


LUCK IN BUSINESS

Of course there is something of luck in every success. But certain it is that luck comes most to him who has the necessary ability and equipment to profit by it. In today's strenuous competition the Mimeograph is a factor of good luck. Sales letters, bulletins, charts, questionnaires, direct mail circulars, house organs, price quotations, stock lists, reports, etc., it produces in limitless quantities, with unmatched dispatch—written or typewritten, and illustrated as desired. But not merely speed and accuracy are the Mimeograph's forte. Real economy is its big virtue. And its famed stencil sheets—Mimeotype, and the new Cellotype—give mimeographing today at less cost than ever before. Reach out for better luck—save time, make money with this great business getter and organization welder. For particulars write A. B. Dick Company, Chicago, or branches in principal cities.

M I M E O G R A P H





GENTLEMEN'S

Spring Clothes

IN DISTINGUISHED STYLES

Notable distinction in woolens and absolute correctness in style are predominant characteristics of our spring suits and coats ready for wearing

Tailored for us by Hickey-Freeman with the special regard for detail that gentlemen who dress with discernment require in their apparel

F. R. TRIPLER & CO.

Outfitters to Gentlemen • Established 1886

MADISON AVENUE AT 46 STREET

New York

with the October, 1929, crash. The patter follows:

Margin callin' brokers, miles of ticker tape

Got a many poor old saphead wearin' crepe,

Wailin' Wall Street I just can't enthuse—

Boo-hoo-hoo-in' I've got the Wall Street Blues.

The verse observes: "Wailin' Wall, Oh, Jerusalem! There's one in New York too." Melodically it is much like other blues.

Yacht parity

OUT in Chicago, two men fought a battle for yacht supremacy to a standstill, organized a limitation conference, and agreed to a two-man pact.

Ten years ago, the 46-foot yacht *Wo-Wo-Tay-See* (Indian for firefly) lay beside the 55-foot yacht *Margo* in the obscure port of Three Rivers, Michigan. Out of the *Wo-Wo-Tay-See* stepped Mr. Eugene Francis McDonald, president of the Zenith Radio; out of the *Margo* stepped Burt Alend Massee, vice president of Colgate-Palmolive-Peet. The two men met, liked each other, talked boats. Mr. McDonald observed the extra nine feet on the *Margo* and was filled with shame for the *Wo-Wo-Tay-See*. He went back to Chicago and bought the *Zenith*—80 feet. Mr. Massee saw the *Zenith*, and the *Margo* lost its charm. He bought a *Margo II*—98 feet. Mr. McDonald snorted and bought the *Naroca*, a full 110 feet long. Mr. Massee rolled up his sleeves and ordered still another *Margo*—\$500,000 and 165 feet. Mr. McDonald looked and scratched his chin. A little later a new queen rode at anchor at the Chicago Yacht Club—the *Mizpah*, \$1,000,000 and 185 feet. Mr. Massee gave up.

Side by side, in amicable agreement, the two boats now roam about the Bahamas, the Cocos, and the Galápagos together. Peace broods over the mid-western front.

Floors

TWO contributions to the psychology of office floors have come to light lately.

Contribution one: the curious case of Mr. P. A. S. Franklin, president of the International Mercantile Marine. Usually a man of affability (he believes firmly in starting the day with a smile), Mr. Franklin has difficulty in preserving

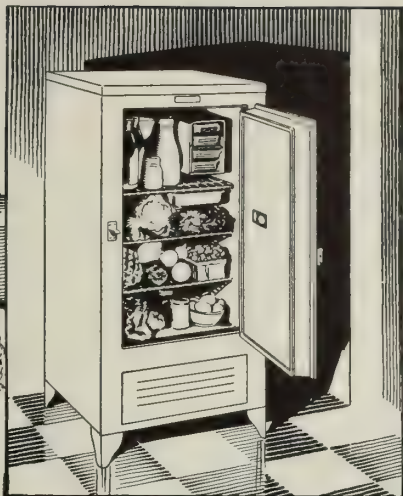
his good humor when an unwary underling picks a bit of paper from the floor and lays it on the desk. Mr. Franklin uses his floor as his filing system, laying his papers there in rows and ranks after their order and importance. In the evening he moves among them as Ruth among the sheaves, gathering them into packets to take home.

Contribution two: the dramatic case of Mr. H. H. Timken, of the Timken Roller Bearing Company. No introvert, Mr. Timken expresses his emotions through whatever media he has at hand. On his office floor is a thick carpet, lush, luxurious. When some untoward wind has blown across the Timken fortunes, Mr. Timken stalks that carpet, scattering burning cigarette butts. Let no one dare pick those cigarette butts up; let no one step on them. Mr. Timken wants them to burn there. Later, sitting relaxed and satisfied at his desk, he likes to look across a carpet covered with welts, like notches on a gun, marks of successful rages.

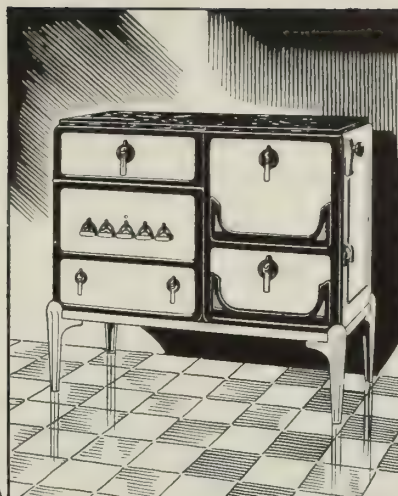
Cutten's policeman

QUIETLY and unobtrusively the quiet and unobtrusive figure of Mr. Arthur Cutten slips in and out of the Continental Illinois Bank Building in Chicago's Loop. Once inside the building, Mr. Cutten pauses for a moment in Clement, Curtis & Company; drifts on down the hall to F. B. Keech; slides thence through a private door into his own secret hide-out, a luxurious suite equipped with flickering Translux ticker tape and comfortable furniture, fit for thought. There Mr. Cutten contemplates the problems of Baldwin Locomotive or the Chicago Corporation in the seclusion he loves.

Outside his office, Mr. Cutten is almost equally secluded. Most of the year he hurries back at night to "Sunny Acres," in semi-rural Downer's Grove, where he has installed the two stained glass windows saved from the old Board of Trade building. In the winter he wanders down to the prosperous but socially obscure winter resort of Biloxi, Mississippi. He sees old friends, grain traders he has known for many years, plain people who, like himself, go to bed at 9:30 and get up at 6:45. In his quiet, genuinely modest life is only one streak of scarlet, one stripe of romance. Mr. Cutten has a fascinated interest in policemen.

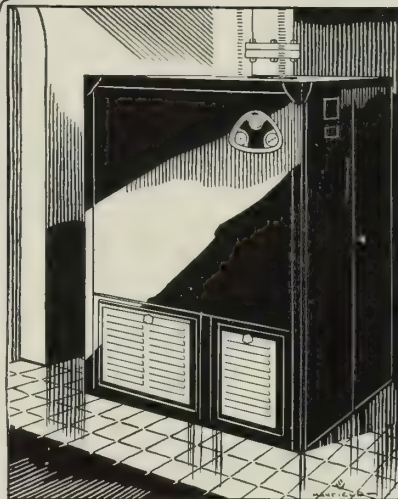
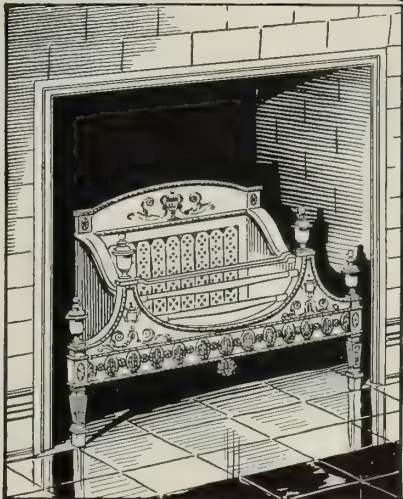


Servel Electrolux Gas Refrigerator
Humphrey Radiant Fire



Magic Chef Gas Range
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GAS



GAS COMPANIES ARE PROSPERING

★ GAS COMPANIES are prospering. Even happier days are ahead.

★ Gas consumers are enjoying better service through the use of appliances designed specifically to burn gas. Gas-designed appliances have long been efficient, they are now beautiful.

★ A leading range manufacturer is offering a handsome new range. The newer radiant heaters are styled to harmonize with their surroundings. Gas-fired refrigerators

are quiet and economical. The new Bryant Boiler is so good-looking, so clean, and so silent that the furnace room is now a livable part of the home.

★ The good-will of influential citizens, stimulated by their enjoyment of gas-heating in their homes, is of inestimable value to every gas company. This good-will does not appear on financial statements, but is reflected in security values.

★ Happy days are ahead for the progressive Gas Companies and for their shareholders. The next ten years will see the greatest expansion in the history of the industry.

BRYANT GAS HEATING

THE BRYANT HEATER & MANUFACTURING CO.
17882 St. Clair Ave. :: Cleveland, Ohio



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Amphibians, powered by Isotta-Fraschini
Courtesy of American Aeronautical Corporation

TRANSITION

YESTERDAY we compared the "one lugger" to the horse; it seemed fast and powerful.

But today, we begin to contrast motor car travel with the swift unhampered flight of our planes and we are no longer satisfied with the mediocre.

However "air minded" you may have become, there is still a thrill in store for you, behind the wheel of this straight-eight, with a hundred and forty **usable** horsepower at your bidding and toe-touch brake control that gives safe handling at airplane speeds.

ISOTTA FRASCHINI

MADE IN MILAN, ITALY

ISOTTA MOTORS, INC.

NEW YORK: 119 West 57 • • • CHICAGO: 846 Rush

He likes to talk about police methods, discuss their problems, criticize their technique. When he dissipates to the extent of a very occasional cigar, it is with Chicago's Chief of Police William Russell, the red-faced, jovial product of a lifetime on the force. They may be observed together on the golf links and at baseball games. Sometimes Mr. Russell stays with the Cuttens on Lake Shore Drive. It was through Mr. Russell that Mr. Cutten struck up his friendship with the policemen in the North Shore section. For now, every so often, a wanderer along the lake front of an evening will find Mr. Cutten enjoying his most riotous pleasure—an absorbed pacing with the local cop around his beat.

Basements, Easy and Uneasy

DOWN in Fourteenth Street in New York, when there is a sale, an occasional plate glass window shatters before the hordes of bargain-hungry ladies. It is a trifle. In Boston when Raymond's advertises a sale, the Irish Boston blue-coats come in mass formation to keep the ladies from tearing the buildings down. Even on days when there is no sale in the ramshackle buildings on Washington and adjacent streets, mobs pour in to seize in triumph the goods hung on gaspipe racks and piled high upon tables. Beacon Street scorns it and buys there. All have read Mr. Frank I. Dorr's advertising masterpieces in the newspapers:

"MORE SHOES! Kumonin Monday Mornin—speshully if you got up GROUCHY. Coz this SHOE STOCK'll make yer laff. Twould Be Well Nuff ter Kum round Nine Ten Or Leven Coz taint a Very Big Stock—We only paid \$1,250 for it.

"Lingerie and underfixins. All Speshully Selected Stock. An I'll bet leven Cents the girls'll be Tickled Mosterdeth When They See It."

It is recorded that Mr. Dorr was once upon a time a school-teacher. Also he was once a sawmill hand. In 1895 he took a job at George Raymond's store. He spent most of his time in the early days there traveling about and buying out the stock which certain stores for financial or other reasons had to sell. When Raymond died in 1915, Dorr, then his right-hand man, managed the business of the estate for a year

and then bought it himself with money he had saved out of his salary. Soon the store began to grow amazingly. Originally it occupied part of one building. Now it has expanded to include half a dozen adjoining or nearby structures. When the first bargain basement was added, Mr. Dorr pondered in his office and then gave the basement a name. He called it the Easy Basement. A second basement with a narrower stair he called the Uneasy Basement. The name has no terrors. Bargain hunters pack it every day.

When Mr. Dorr acquired his "General Stoar," it did about a million dollars in business annually. Today, it is estimated, the store sells every year ten million dollars, worth of goods. Originally all its stock was bought from other stores. Today only a portion comes from that source, but still Raymond's buys an average of one store's stock a week.

"Boston business men think that I have horns, and that I am cloven-footed," says Mr. Dorr dryly.

He rather likes them to think that. Just as he likes his employees to call him "F.I." and likes the public to call Raymond's the "democratic store." He has made money enough to build his store in marble, but he lets it sprawl because he likes it that way and because he knows the public likes it that way.

One of the Hilltoppers asked Mr. Dorr as he was leaving a dignified meeting of Boston business men how he could possibly "go back to write those terrible ads of yours."

"Why, this dignified part of me is all bluff," said Dorr, "and those ads are natural."

Girl pages

IN the Fidelity National Bank & Trust Company at Kansas City, Missouri, girls in colored smocks carry messages, run errands. They are the office boys. During the War the bank operated with girl pages and messengers, and it was one of the few institutions in the United States to retain its girls after the War. Its reason sounds like a paradox: girls make better office boys than boys. Douglas Wallace, assistant vice president in charge of employment, elaborates: Girls are steadier. Girls are soberer. They do not devote too much time to playing. Girls are not always looking for fifty cents or a dollar a week more in their pay envelopes.

● If your Spring Song is keyed to the marimba symphony of caulking mallets

If you know no scent more devastating than attar of oakum

No blooms more sprightly than new bunting

Isn't it time you gave a thought to the perfecting of summer leisure?

How sweetly a sleek, swift, new Gar Wood runabout would fit into your playtime program. For, seek as you will the world over, you'll find no runabout so ship-shape, so sea-going as the boats that Gar Wood's craftsmen are building. And certainly there's none to compare with them in sheer luxury of finish and appointment.

Open or enclosed or convertible, the fourteen new Gar Wood models include the very boat best suited to your individual taste and needs. Speeds range from 30 to 55 miles per hour, prices from \$2,250 to \$12,950. Delivery, *right now*, if you wish.

You *should* have boundless pride in your boat—and you will if it is built for you by the men who build the Miss Americas. It is high time you had complete information on Gar Wood boats. Why not write today, *now*?

GAR WOOD INC.

THE GREATEST NAME

IN MOTORBOATING

206 River Road Marysville, Mich.
New York Branch: 1868 Broadway at 61st St.



As this ad is being written the new 22 foot Gar Wood Series is going into production. These are typical Gar Wood boats, reduced in size to sell at a proportionately lower price. Full details on request.

Useful Beauty — the new requirement in floors

Here is a floor designed to please the eye—and built to move about on, noiselessly, buoyantly, safely, and without fatigue. It is laid with Stedman Reinforced Rubber Tile, cut and fitted in a special pattern of enduring colors rich in pleasing detail. • • And yet it is a floor that can be taken for granted. Its surface is smooth but not slippery, its structure is

*** REINFORCED:** firm yet resilient. It resists wear. Its beauty is a *useful beauty*, in-built by a process that insures uniform quality and long life. • • Your inquiries will receive individual attention. A booklet in full color is available, without obligation. • • • •

In the Stedman Process minute cotton filaments, uniting with the rubber under high pressure and heat, are responsible for its unusual resistance to wear and distention, its lasting resilience and smooth, impervious surface—characterized by color veinings of remarkable fineness and beauty. • • •

STEDMAN RUBBER FLOORING COMPANY, SOUTH BRAINTREE, MASS.

Stedman Reinforced* Rubber Tile

BILLIARD ROOM AT THE CHICAGO CLUB

Chicago. Granger & Bollenbacher, Architects. The floor shown here is one of many important areas in this famous club that are floored with Stedman Reinforced Rubber, laid in special panels designed by the architects.

ROOM PHOTOGRAPH COPYRIGHT
E. L. FOWLER, CHICAGO, ILL.





THE SYMBOL OF QUALITY FOR PETROLEUM PRODUCTS



RESEARCH... THE GUIDE TO PROGRESS
Anticipating every development; insuring ever higher standards of
quality . . . Texaco Laboratories are the source of Texaco progress.

Texaco helps mine 64% of the nation's copper

Of all the copper produced by the United States in a single year, two-thirds is provided by mines using Texaco Lubricants.


Mining companies choose Texaco for the same reason that it is preferred in every branch of industry, commerce and transportation. Today it would be difficult to point out a single lubrication problem that Texaco has not solved. Texaco Lubricants, exposed to the white heat of a steel ingot—or to pressures of tons per sq. in., are rendering effective lubrication. Even in acid mine-waters Texaco provides an effec-




tive lubricating barrier against corrosion.

In each of our 48 States, in every civilized nation—wherever wheels turn and pistons flash, Texaco has effected almost unbelievable economies in wear reduction. This has been made possible by the development of specialized products for specialized needs.

THE TEXAS COMPANY
*Refiners of a complete line of Texaco Petroleum Products, including Gasoline,
Motor Oil, Industrial Lubricants, Railroad and Marine Lubricants,
Farm Lubricants, Road Asphalts and Asphalt Roofing.*


TEXACO
The mark of quality for petroleum products


Even the youngest bee knows his stuff. "Some flowers," he will tell you in his bumbling way, "have honey, and a whole lot of brighter-colored and bigger ones are as dry as a dustbin." 

We wish the bee-test for honey might be applied to circulation. In these days of forced-draft methods used for the purpose of building huge circulation figures, editorial interest has been forgotten.  Better Homes and Gardens wasn't built. People today are right in the midst of a vogue of garden building and home decoration. They want Better Homes and Gardens. They buy it to read its helpful, informative articles on garden making, home decoration, home management, cooking.  No forcing methods—no stimulant, save reasonable subscription price and real editorial interest.  Today Better Homes and Gardens is reach-

BEE LINES TO BIGGER BUSINESS



ing 1,375,000 homes a month. 85% are homes owned by those who live in them. Can you ask better buying incentive than the owner's natural desire to make that home more and more beautiful inside and outside? 

The garden is a vogue—today's biggest and newest vogue. Always, in publishing history, success has crowned the publication shrewd enough to sense and promote a vogue interesting to readers. This was true of the fashion magazine when it made its appearance, of the business-efficiency publications, of the news-review weeklies. It is true today of Better Homes and Gardens.  Try this new, vitally alive circulation. Add its youthful vigor, its keenness of editorial interest, to the older, more staid circulation you are already using. We will give you additional evidence of results upon request.

BETTER HOMES AND GARDENS DES MOINES
IOWA



A Cuisine that the whole Atlantic toasts!



At the recent National Hotel Exposition, four prize awards for skill in transatlantic cuisine were bestowed on the famous fleet of the United States Lines. A sterling tribute to menus that sparkle with . . . meats from blue-ribbon stock . . . pheasant, grouse and quail . . . Malossol caviar . . . English sole . . . fresh berries and melons, out

of season . . . mushrooms and truffles from France . . . delicious American coffee. Same fine quality food on every ship. To Europe? Take the swift, smart LEVIATHAN, World's Largest Ship . . . ship-to-shore telephone service, "talkies," new, brilliant Night Club . . . with Ben Bernie music. Or the cabin liners, George Washington, America, Republic, President Harding and President Roosevelt for luxury at low cost.

PREPARED BY CHEFS OF INTERNATIONAL FAME;
SERVED BY STEWARDS, ARTISTS IN THE MANNER
One chef catered for an emperor . . . others for hotels renowned for their cuisine. Pick of the culinary craft, they know precisely how to please the American palate. Stewards who know how to suggest with finesse and serve with gracious charm. Special kitchen service for those on strict diets.

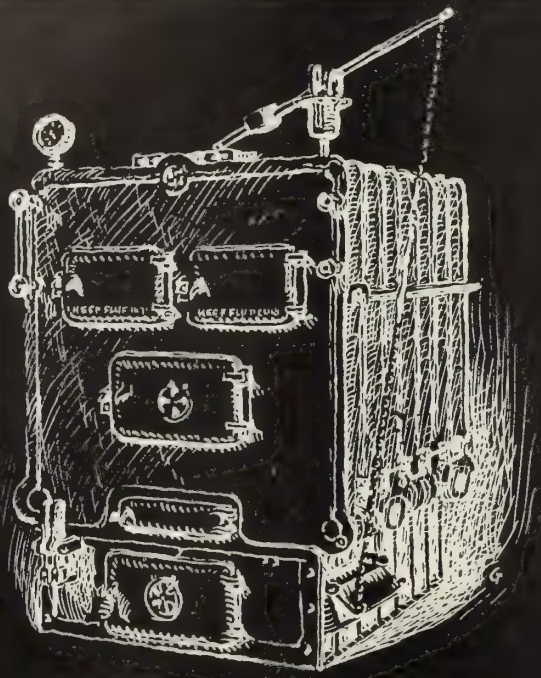


UNITED STATES LINES



For complete information see your local agent or our offices: New York, 45 Broadway; Atlanta, 714 Healy Building; Boston, 75 State St.; Chicago, 61-63 West Jackson Boulevard; Cleveland, Hotel Cleveland Building; Detroit, 1514 Washington Boulevard; St. Louis, Jefferson Hotel; Philadelphia, 1600 Walnut Street; San Francisco, 691 Market Street; Los Angeles, 756 South Broadway; Minneapolis, 312 Second Avenue, South; Seattle, 1337 Fourth Avenue; Pittsburgh, 705 Liberty Avenue; Washington, 1027 Connecticut Avenue; Little Rock, Wallace Building; New Orleans, Hibernia Bank Building. Berlin, Unter den Linden 9; Hamburg, Cor. Alsterthor & Ferdinandstrasse; London, 14 Regent Street, S. W. 1.; Paris, 10 Rue Auber. THESE LINES OFFER A COMPLETE FREIGHT SERVICE — SPECIFY AMERICAN SHIPS FOR YOUR FOREIGN TRADE.

Statistics



The Long and Short of It Means Fuel Thrift

The Burnham's long
fire travel makes its
short coal bill. And
we can prove it.
Want the proofs?

P. S.—

Send for "Letters To and Fro." It
tells of eight peoples' successful so-
lution of eight separate home heat-
ing problems. Send for it.

Burnham Boiler Corporation

IRVINGTON, NEW YORK

Representatives in principal cities of United States and Canada

One pays to dress well

The problem confronting the bachelor of modest income when he would buy clothes is as nothing compared to that which must be faced by the man whose income is in excess of \$100,000 per year. The first may complain of difficulties in finding a place where he can get a lot of good clothes for little money. But the latter may live and die without discovering the most expensive article of apparel in any given class. However, he may pay the prices noted below without being eccentric, and though most of the articles are made to order, they are being made to order daily.

In drawing up the clothes budget that follows, it has been assumed that the prospective shopper has already a complete wardrobe, will be purchasing replacements only, and would not spend more than \$10,000. He is a man whose wardrobe is conservative in extent, but superlative in quality. He will buy in a twelvemonth:

6 sack suits (\$200 each)	\$1,200
1 cutaway	235
1 full dress	240
3 white vests	150
1 tuxedo	260
1 black brocaded vest	50
1 opera hat	20
1 silk hat	20
1 bowler	20
1 soft hat	50
1 panama	200
6 pairs of shoes for street wear	300
1 pair of evening pumps	40
1 pair cloth-top patent leather shoes	45
2 pairs of spats	12
1 evening coat	250
1 topcoat	250
1 overcoat	300
2 dozen shirts (\$50 each)	1,200
2 dozen collars (\$2.50 each)	60
2 dozen plain linen handkerchiefs	408
2 dozen suits of underwear (shirts and shorts)	2,400
3 dozen socks	360
2 dozen neckties	336
6 evening ties (3 white, 3 black)	12
6 pairs pajamas	450
1 lounging robe	250
3 pairs of gloves	36
1 walking stick	200

\$9,354

These barest necessities allow him a scant \$600 for accessories. And if he should lose a set of studs during the year, he would have to content

himself with something less than those procurable at \$4,000 to \$10,000 a set, or scorn the limit of his budget. It has not been presumed that he will travel at all. But by omitting accessories entirely he will be able to purchase an alligator suitcase for \$600.

His wife, when he can afford one, will readily outspend him, even if she keeps her apparel purchases down to the number indicated below:

12 sets of lingerie	\$6,000
3 corselets	450
6 dozen pairs of daytime stockings	1,296
3 dozen pairs of evening stockings	648
1 dozen pairs sport lisle stockings	96
24 pairs shoes (\$60 to \$120 pair)	1,800
2 suits (1 with fur)	800
18 evening dresses (\$175 to \$500 each)	4,200
1 evening wrap with fur	5,000
1 matching wrap	2,000
10 sport and afternoon dresses	1,800
4 daytime coats	1,400
10 hats	1,050
6 handbags	575
1 dozen lace handkerchiefs	600
24 linen handkerchiefs, monogrammed	96
6 pairs long evening gloves (\$12.50 pair)	75
12 pairs daytime gloves (\$6.00 pair)	72
	\$27,958

From the foregoing list, fur coats have been omitted entirely upon the supposition that madame can make last year's serve for another season. If, however, she must have a fur coat of, for example, Revillon Freres' finest matched chinchilla, it will cost her \$80,000 and will rocket the family clothing bill into atmosphere so rare that budgets and budgeteers cannot sustain life.

Between 1908 and 1918, eleven manufacturing companies adopted the five-day week. From 1918 to 1928, 281 more companies shortened their week. Now some 650,000 laborers (about 3 per cent of the total number) live on a five-day working schedule. Two hundred thousand of these are employees of Henry Ford.

Ice cream production has increased sixfold since 1914; candy twofold.



O land gypsy ever enjoyed the freedom of that nomad of the water, the Chris-Crafter. To him the waterways of the whole world lie open. There are no white lines, no straight pavements. Every bay and river invites the Chris-Crafter to rest or to explore, to hunt or to fish. The shorelines offer wide diversity of play and recreation. Thrilling races, regattas, boat parties, picnics, social affairs—all are within range of the fast, roomy Chris-Craft

Every waterside family needs a Chris-Craft, and every member of the family will enjoy and use it. It handles even more easily than a motor car and has the same steering, starting and lighting equipment. There are fast, racy runabouts, luxurious sedans, commuters, cruisers and yachts in the 1930 Chris-Craft fleet. Let the Chris-Craft merchant help you select the one that fits your desire. Illustrated catalog may be had by writing Chris Smith & Sons Boat Company, 125 Detroit Road, Algonac, Michigan.

24-foot Chris-Craft Runabout, 125 H. P., speed up to 35 M. P. H. \$2850

NEW!

A 17-foot Runabout, 25 M. P. H., priced at \$1295.

A few desirable sales territories open. Wire for details.

Chris-Craft

World's Largest Builders of All-Mahogany Motor Boats

Runabouts—Sedans—Commuters—Cruisers—Yachts
25 Models—17 to 43 feet—\$1295 to \$35,000

Industrial . . . LOS ANGELES COUNTY



© SPENCE



The Ford Factory at Los Angeles-Long Beach Harbor, nearly completed.



United States Steel Corporation enters Los Angeles County in 1929.



The Willard Storage Battery new factory to serve the Western States.



The Continental Can Corporation's new factory serves the Pacific Southwest.

OFFERS to manufacturers a local market of 2,500,000, of the same metropolitan character as Chicago and New York,—a large central city surrounded by smaller communities,—with adequate space for economic, well balanced growth:

- With highest income, savings deposits, purchasing power and automobile ownership per capita in the U. S.
- With quick and economical transportation by motor truck, rail and airplane lines to nearby markets which comprise 40 per cent of the population of the Coast States, and 175 steamship companies to and from Los Angeles Harbor in foreign and domestic trade;
- With more local basic raw materials of industry than any Coast community, and imports at low cost;
- With the only local supplies of petroleum and natural gas among cities of the coast, abundant cheap water and electric power;

—With unsurpassed labor supply and efficiency, working under ideal climatic and living conditions;

—With a present *manufactured output exceeding a billion dollars* annually, and \$35,000,000 invested in new factories and expansions last year, at lowest costs of building and maintenance;

—With a program of general development in 1930 of \$400,000,000—

The Eastern manufacturer finds here the dominant industrial and distribution center and most marked progress in the West, with the highest average of advantages for the location of his Pacific Coast factory.

Detailed information for any specific industry will be cheerfully furnished free of cost or obligation.

Industrial Department
Los Angeles Chamber of Commerce



INDUSTRIAL LOS ANGELES COUNTY

NORTON

Grinding Wheels

Grinding and Lapping Machines

Abrasives for Polishing

Refractories

Pulpstones

Porous Plates

Floor and Stair Tile

Abrasive Aggregates



*Wood block engraving by Howard McCormick
from mural by Arthur Covey*

Colorful highlights fire red, yellow and white intense heat.
Norton Grinding Wheels are passing through the vitrifying process.
Heat properly regulated and controlled converts ceramic bond into glass
or glaze, bonding millions of abrasive cutting units into a major tool of the
machine shop. This is one of the steps in the production of grinding wheels
—meeting the requirements of the metal industries everywhere.

NORTON COMPANY · WORCESTER · MASSACHUSETTS · U · S · A

The New York Trust Company

*Capital, Surplus and Undivided
Profits \$47,000,000*

DOMESTIC
and
FOREIGN BANKING
FACILITIES

CORPORATE
and
PERSONAL TRUSTS

100 BROADWAY
40TH STREET AND MADISON AVENUE
57TH STREET AND FIFTH AVENUE

This WORLD CRUISE has a "5th ACE"



Yama, "King of Hell," as impersonated by a Buddhist Lama

• NOT only (1) a 137-day itinerary which concentrates on high-spots... (2) a cruise-calendar which follows spring around the world... (3) a distinguished ship of 21,850 gross tons, Empress of Australia... (4) a cuisine of New York-Paris standards, a service of kindly, personal interest... not only these but also the one and only "5th Ace" in world cruising. • This "5th Ace" is Canadian Pacific's world net-work of

rail, ship and hotel... the entrée established through Canadian Pacific's offices in key cities of the globe... the "know-how" of the world's greatest travel system. That is why... you have nothing to do but enjoy. • Why not send for booklets, ship plans? Your own agent or any Canadian Pacific Office: New York, Chicago, Boston, Montreal and 31 other cities in United States and Canada.

INDIA
Bombay to Dar-
jeeling, Taj Mahal
to Madura

MADEIRA
Basket-sleds . . .

ALGIERS
Secret streets . .

ATHENS
Templed Acropolis

BETHLEHEM
for Christmas . .

CAIRO
New Year's Eve . .

CEYLON
Spices, elephants

SUMATRA
Exotic Padang . .

JAVA
Bamboo music . .

SIAM
Court dancers
jangling in gold . .

CHINA
Color . . . people

JAPAN
Geishas, gardens

AND 10
other countries . .

In 137 days.
From \$2000 . . .

YOU SAIL when
winter comes . . .

DEC. 2,
from NEW YORK

WORLD'S GREATEST
TRAVEL SYSTEM
Canadian Pacific



New Indian-detours

Most distinctive
motor cruise service
in the world

THE DELUXE WAY—by Cadillac Harveycar—of visiting the hidden primitive Spanish Missions, old Mexican villages, colorful Indian pueblos, prehistoric cliff-dwellings and buried cities—all set in the matchless scenery and climate of the Southern Rockies. Service is the equivalent of motoring with the finest of private facilities. Specially equipped Cadillac Cruisers are used. Driver-mechanicians are Harvey trained, and a private courier accompanies each party, limited to four guests to a single car.

The Frijoles-Puyé Indian-detour

**TWO DAYS
FORTY
DOLLARS**

Old Santa Fe with nights at unique La Fonda. Primitive Mexican Settlements in Pojoaque Valley, Santa Clara and San Ildefonso Indian pueblos. Frijoles Canyon and the cliff-dwelling ruins of Puyé.

The Taos Indian-detour

**THREE DAYS
SIXTY-FIVE
DOLLARS**

The Frijoles-Puyé Indian-detour in full, with luncheon under the Puyé cliffs on second day—thence to Taos Indian pueblo, overnight at famous Taos town, and the Rio Grande gorge on the return.

There are a score of other Indian-detours, formerly known as Harveycar Motor Cruises, to every out-of-the-way corner of New Mexico and Arizona

A Day in Old Santa Fé

24-hours, train to train, Tesuque Indian pueblo and 60 miles by Harveycoach. \$12.50 all-inclusive

The individual rate includes every expense en route—motor transportation by Harveycar, courier service, meals, hotel accommodations with bath.

Eastbound or westbound, these distinctively new Indian-detours will commence and end at Lamy, New Mexico, on your Santa Fe way to California.

HARVEYCAR INDIAN-DETOURS, 1265-A Santa Fé, New Mexico

Please send free copy of Indian-detours booklet and map.



clip and mail → →

Name _____

Address _____



Copyright 1930
WM. F. WHOLEY CO., INC.
New York City

A MAN'S OFFICE, like his home, should reflect his tastes, suit his temperament and harmonize with his type of business. Through years of experience in the creation of interiors for executives, professional men and corporations, our designers have attained a rare faculty of interpreting the individual needs of each client in terms appropriate to his calling.

In addition to designing, our service includes the expert planning of office space, selection of furnishings and the execution of every detail.

The William F. Wholey Co. Inc. *Equipment Specialists* 11 East 36 St. New York



Sensitiveness

Expressing the *Spirit*
of Business

Sensitiveness in Business is the most delicate of magnetic needles. It gets the coming of opportunity, or the slightest change in conditions, personal or material; and inspires management to respond with action—before the cause.

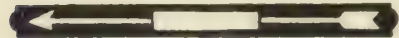
Some call this Sensitiveness brains, vision—even luck. It is none of these. Not mind, not matter, but rather the *Spirit* of Business—the element required for supreme accomplishment. Check up the outstanding successes, and you will find this human magnetic needle, Sensitiveness, at the controls. It gives Business its *Spirit*, its keenness; makes work fascinating and satisfying.

Modern Accountancy recognizes and applies Sensitiveness as one of the most vital of human attributes in business. It does not manufacture it. But it does *inspire* it.

ERNST & ERNST

ACCOUNTANTS AND AUDITORS
SYSTEM SERVICE

AKRON	GRAND RAPIDS	PORTLAND, ME.
ATLANTA	HOUSTON	PROVIDENCE
BALTIMORE	HUNTINGTON,	READING
BIRMINGHAM	W. VA.	RICHMOND
BOSTON	INDIANAPOLIS	ROCHESTER
BUFFALO	JACKSON, MISS.	ST. LOUIS
CANTON	KALAMAZOO	ST. PAUL
CHICAGO	KANSAS CITY	SAN ANTONIO
CINCINNATI	LOS ANGELES	SAN FRANCISCO
CLEVELAND	LOUISVILLE	SEATTLE
COLUMBUS	MEMPHIS	TAMPA
DALLAS	MIAMI	TOLEDO
DAVENPORT	MILWAUKEE	TULSA
DAYTON	MINNEAPOLIS	WACO
DENVER	NEW ORLEANS	WASHINGTON
DETROIT	NEW YORK	WHEELING
ERIE	OMAHA	WILMINGTON, DEL.
FORT WAYNE	PHILADELPHIA	WINSTON-SALEM
FORT WORTH	PITTSBURGH	YOUNGSTOWN



Many Good Securities

Are NEVER Listed

COUNTLESS investment issues find their way into the strong boxes of shrewd investors, which are not listed but have excellent markets, such as bank and insurance stocks and the securities of many sound and long established American business enterprises.

In our Investment Department, experienced traders are available at all of our nine offices, who are in daily touch with the leading "counter" markets of the country and who, with the aid of our private wire system, will obtain for you, QUICKLY, the correct market for your unlisted stocks or bonds.

Prompt personal attention to orders or requests for market prices on unlisted securities will be given if you will telephone or telegraph our Investment Department at the nearest office

HORNBLOWER & WEEKS

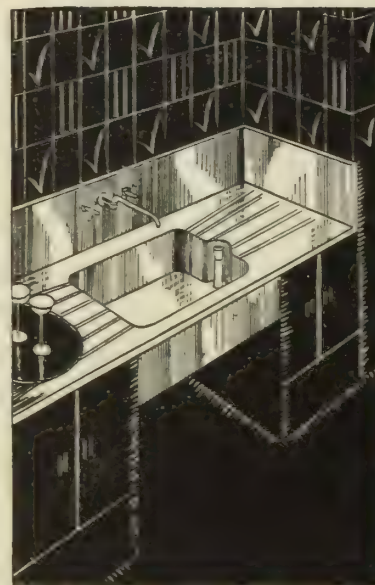
ESTABLISHED 1888

BOSTON	NEW YORK	CHICAGO	CLEVELAND
DETROIT	PROVIDENCE	PORTLAND, ME.	PITTSBURGH

Members of the New York, Boston, Chicago, Cleveland, Pittsburgh and Detroit Stock Exchanges and the New York Curb Exchange



Your Butler's
Pantry Is an
ATELIER—



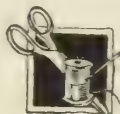
—and your butler is the artist. Provided, of course, that he has those facilities that inspire the creation of culinary masterpieces and allow them to be achieved. • • A copy of "Butler's Pantry Sinks by Elkay" will suggest many ways of improving your service, and will be sent upon request.



ELKAY

4707-4717 Arthington Street
Chicago

Tailoring to Tycoons



Accredited supremacy
in the art of putting
individualism into gentlemen's
attire for all occasions.



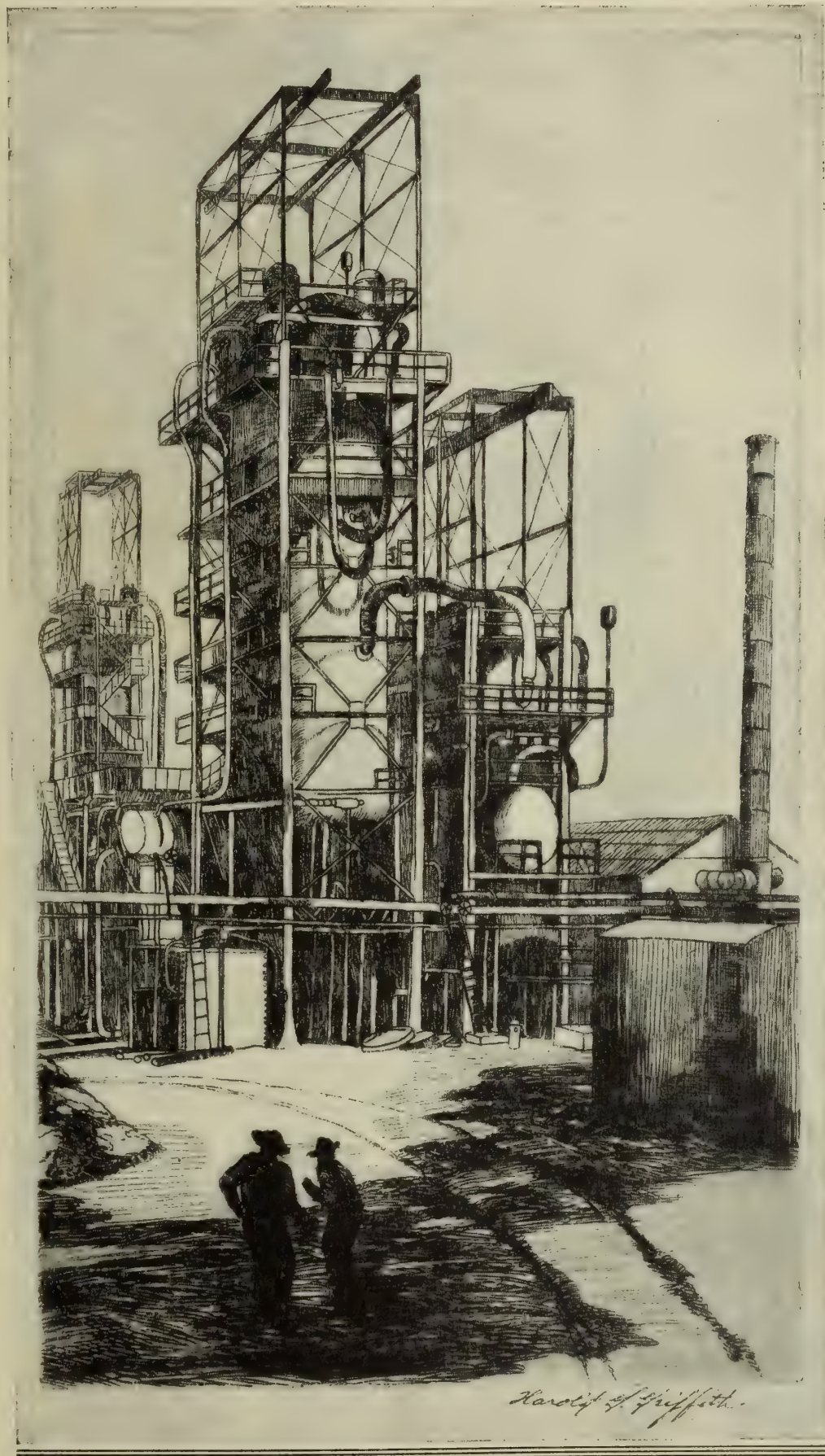
Alfred Nelson

Established
1888

580 FIFTH AVE.

NEW YORK

IF YOU WANT CHEAPER FUEL



CLEVELAND'S fuel sources are near at hand, diversified in kind, inexhaustible in amount, and high in quality. They assure you cheap, competitive and reliable supplies of fuel.

¶ Several of the nation's most important coal fields are located within 90 to 250 miles of this city, and are tapped by five of Cleveland's seven railroads. The city is also the focus of a great natural gas region, with gas of high B.T. U. content always readily available at reasonable prices.

¶ Ten or more nationally known oil companies operate at Cleveland, two of them with local refineries and pipe line connections. Fuel oil is always available in quantity at favorable prices.

¶ Fuel is one of the ten important factors in the selection of a business location. For specific data regarding fuel costs at Cleveland, address this Bank.

**GUARDIAN
TRUST COMPANY**
CLEVELAND, OHIO

RESOURCES MORE THAN \$170,000,000

© G. T. Co.

THE CRACKLY SAILS OF MODERN COMMERCE



Crisp new bills—
here today and
gone tomorrow—

but giving you a brief feeling of pride . . .
as they come and go.

So with checks; only the pride is greater
because they are your PERSONAL medium of
payment. Because they express your pride in
your business . . . in your personal affairs . . .
in your bank.

Checks made on La Monte Paper are safe
and durable. They have every stout quality
that good checks should possess. But beyond
that they have a substantial dignity that favor-
ably reflects the standing of the man who signs
them.

Does your bank favor you with La Monte
checks? George La Monte & Son, 61 Broad-
way, New York City.

The wavy lines instantly identify La Monte National
Safety Paper—the STANDARD in check papers.



WHITAKER & CO. INC.

SPORTING AND GENERAL TAILORS



666 FIFTH AVENUE
NEW YORK

AND AT 43 CONDUIT STREET LONDON W.



Salesmen's Compensation

A helpful study of this subject will be
sent to interested executives. Selling
Costs, Sales Quotas, Expense Budgets,
Application of Expense to Products,
and Basing Pay on Profits are among
points discussed.

Scovell Wellington and Company

ACCOUNTANTS & ENGINEERS

10 EAST 40TH STREET, NEW YORK CITY

BOSTON	CLEVELAND	CHICAGO	PHILADELPHIA
SPRINGFIELD	SYRACUSE	KANSAS CITY	SAN FRANCISCO

\$800,000 in Advertising

ON A CLASS PRODUCT AND ON A MASS PRODUCT

Based on Copy Tests

IN THE early days of advertising, companies prospered by the aid of native wit alone. That time has passed. Today consistent results demand more.

Here are two simple examples of the use of advertising tests in the drug field:

The Class Product: The fundamental sales message had been determined. The problem was to discover which was the best of four styles of presentation. There were the Speed-Convenience approach, the News-Scientific approach, the Sex approach, and the Negative approach.

Four advertisements were prepared, identical in every feature except the headline and illustration. In order to insure maximum returns and maximum accuracy, the free offer of a full-size bottle of the product was buried in the copy.

The four advertisements appeared in the same newspapers in four cities, on the same days, and in corresponding positions. The sequence was staggered to compensate for both priority and cumulative factors.

The results in each city were found to be substantially similar. The four ideas rated as follows: 83, 89, 99, 100.

On the basis of these results, national advertising was prepared, which is now establishing a new level of results in both coupon-response and sales volume.

So much for a class product. The following is an epitome of a test campaign for a mass product used in 15,000,000 homes.

The Mass Product: This product has thirty uses, but nine predominate. Since actually two billion advertising impressions were to be made in 1930, the correct allocation of the appropriation by uses was the *sine qua non* of efficiency in the campaign.

Nine test advertisements were prepared, as equal as possible in every factor of appearance and copy except the *use* featured.

The scheduling of these 81 insertions in nine cities was done with equal impartiality.

The results were definitive. If the leading use is rated at 100, the series stood in this order: 68, 77, 79, 82, 88, 91, 92, 99, 100.

A supplementary test on this same product had to do with six different *types of presentation*. Here the use advertised remained constant, and as before, the advertisements were run under equal conditions. Their ratings were: 45, 70, 79, 95, 99, 100. Type No. 100 is now appearing in newspapers with 6 million circulation, and if a further test now in progress verifies the foregoing conclusions, future plans will be prepared accordingly.

By utilizing the two results it was possible to spend on each use the exact amount that its proven sales appeal warranted and to feature the various uses in the most effective type of presentation.

IN any campaign there may be elements of chance which research and test can eliminate or reduce. But apart from this, the aggregate importance of even slight improvements in campaigns of immense circulation, makes a 3% outlay on research, to say the least, an investment to consider.

Such service on our part is laborious. To plan, execute and analyze a searching test of advertising may entail as much work as planning an entire campaign. There are no immediate profits for the agency in any degree commensurate with the effort involved. That we render such service is due in part to the unusual fee system under which we work. The advantages of this system in the direction of an unbiased service are obvious; the funds available for service are applied to those activities which will produce for the client maximum returns on his outlay.

We shall be glad to furnish information about these campaigns to business executives and bankers who may be interested.

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NEW YORK

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are the products of Master Craftsmen

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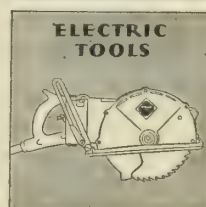
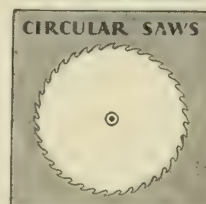
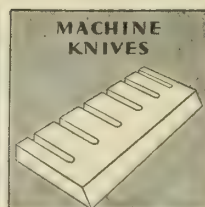
From tree to home, Simonds products have performed a significant service. In the vast timberlands, Simonds cross-cut saws felled the trees... Simonds band and circular saws transformed the giant logs into valuable lumber. In the mill with ease and precision, Simonds planer knives produced surfaces of satin-like smoothness. Even the delicately traced ornamental designs you see in the

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SIMONDS INDUSTRIES
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BACK OF THE EDGE . . THE STEEL . . . BACK OF BOTH . . SIMONDS

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THE GOLDEN, GEM-STUDED PEACOCK THRONE OF PERSIA, ITS HISTORY NOW LOST IN THE CONFUSED LEGENDS OF DEAD DYNASTIES, ONCE MORE ENTHRONED A KING WHEN RIZA KHAN PAHLAVI ASSUMED THE PERSIAN CROWN

Gold, Metal and Money

Gold standards psychological and gold standards economic. What part is played by the Ridge of the White Waters and why, from time to time, gold leaves home.

THERE are metals rarer than gold and more precious. But no other substance remotely approaches gold in its grip upon the imagination of mankind. We do not speak of the Platinum Rule or of the Radium Gate. We discuss, instead, golden days and golden youth and golden weddings and a golden future. It is gold that makes the king's crown and the miser's hoard. Gold is superior to changes of chemistry and of commerce. It remains the universal symbol of riches, the inevitable metaphor of wealth. And in addition to its psychological prestige, gold remains the solid and unsentimental foundation on which the world's structure of currency and credit is built today.

Yet, although an adequate supply of gold is essential to contemporary civilization, and although the constant expansion of world trade and therefore of world credit calls for a continually increasing use of gold, there are only a few spots in the earth's surface from which gold can be profitably extracted. More than half of the gold produced in the world today comes from one reef of gold-bearing rock—a reef known as the Witwatersrand (Ridge of the White Waters), located about 1,000 miles north of the Cape of Good Hope and about 500 miles inland from the African East Coast. Many thousands of years ago the site of what is now this buried rock was the delta of a great river which, rising somewhere in Central Africa and running through gold-bearing regions, washed the gold of its basin down to its mouth. After the river had dried up and the arms of its delta had hardened into rock, covered over with many layers of younger earth, some internal convulsion tilted up the gold-bearing strata so that at one point it was forced to the earth's surface. In 1886 one George Walker, who was helping a Dutch farmer build a house, stumbled upon this outcropping of the main reef, and in the intervening forty-four years the Rand Mines have produced more than five billion dollars worth of gold. Since 1905 they have been the world's greatest gold source; for the last ten years they have yielded approximately one-half the world's new gold; and in 1928, out of a world production of 19,674,638 ounces of pure gold, the Rand production totaled 10,352,000 or approximately 52 per cent.

The Rand 1928 production was the largest in its history, but the arc of the curving reef has already been followed six thousand feet down below the earth's surface, and a point of decline and a point of exhaustion are inevitably approaching. Conceding the Rand another fifty years of production (and a hundred years is a very long life for a gold field), the question obviously arises as to where gold will then be found. The United States, although still second in world production, produces today less than half its 1915 production, and Australia, another great 19th century producer, is also rapidly declining. Economists estimate that the world's stock of gold should increase at the rate of 3 per cent a year, but not since 1915 has this ratio been realized and the 1915 production of 22,737,520 ounces has never since been duplicated.

Economists with a flair for prophecy have therefore found

in the possible future exhaustion of the world's gold resources a major worry for the coming generations. Up to the present time, gold famines have been national rather than international, caused by the flow of gold from one country to another, and experienced by those countries which were unable to keep their share of the world's gold from emigrating toward greener and more prosperous pastures. The larger question of gold conservation (or the larger problem of gold exhaustion) of course concerns itself not so much with a condition in which one country has more gold than another as with a condition in which no country has gold enough. And such an economist as Irving Fisher believes that this world gold famine will set in within a few years, resulting in price declines and business depressions in even the immediate future.

This alarmist theory is based not only on the decline of world gold production from its peak of 1915 and upon the expansion of world commerce, an expansion interrupted by the World War but since resumed, but also upon the diversion of gold for industrial uses and also upon the loss of gold through the hoarding habits of its oriental collectors. With the monetary supply of gold equal to about ten billion dollars and the yearly production equal to about four hundred million dollars, the world's demand for new money would be adequately met if the entire four hundred million were used for money. But of the \$409,000,000 of new gold produced in 1928, only \$246,000,000 (approximately 60 per cent) was available for money, the other \$163,000,000 being used either for industrial purposes or going out of circulation into Indian or Chinese hands.

The most important industrial user of gold is of course the jeweler, although fortunately platinum has partially superseded gold as the approved setting for diamonds. Pencils, pens (including fountain pen points), watches, watch chains, lockets, charms, and miscellaneous trinkets continue, however, to constitute a demand for gold. Hollow-ware (gold plate, loving cups, cigarette cases, picture frames, and the like) is another industrial form of gold consumption, although here silver (costing one-seventh or one-eighth as much as gold) is a much more popular material. Amateur athletes, for instance, win cups of silver but medals of gold.

Another important gold user is the dental profession, since gold, malleable and noncorrosive, can readily be hammered into tooth cavities. Dentists buy filling gold in little buttons, called pennyweights, priced at about \$1.50. Inasmuch as a whole pennyweight may go into one tooth, a person with eight or ten gold fillings may have in him gold to the value of twelve or fifteen dollars. Some of this gold is reclaimed (by peddlers who purchase from dentists extracted teeth with gold fillings), but most of it goes to the grave with its owners, constituting, in the aggregate, one of the largest classifications of lost gold and provoking occasional cases of body snatching.

The largest source (from the economist's standpoint) of wasted gold is, however, the hoarded gold of oriental, especially Indian, potentates. The Indian, still confusing wealth

with cash, values gold for its own sake, using it to decorate his shrines and his women, and particularly hoarding it in the form of gold coin or gold bullion. A San Francisco bank, for example, does a brisk trade in handy little five ounce gold bars (worth \$100) made up especially for the oriental trade. In 1928 British India imported \$76,007,000 in gold, a large portion of which went to warm the heart and delight the gaze of various rajahs, but might as well not ever have been mined as far as concerns the world's stock of circulating money. Similar hoarding, though not on so large a scale, is common also in China and in Egypt.

Meanwhile the gold mines of the Rand continue at peak production, and the nations of the world have not in general shown any marked agitation regarding gold exhaustion. It is true that the Rand reef represents an unfortunate concentration of the world's gold, that no other comparable fields are at present in production, and that the Rand fields may conceivably give out before adequate replacements are discovered. On the other hand, there is always the optimistic argument that a great new gold field may in any year be opened. Perhaps this year or next year or the year after a house builder in Africa or Russia or Asia or Canada may stumble upon another gold field equal to or greater than the gold fields of the Rand. Since 1493 the world has produced gold worth about \$21,120,298,527, one-half of which has been produced since 1902. Economists in 1493 might have been worried about the world's gold, and the discovery of American gold would have allayed their forebodings. In the middle of the 19th century, another gold famine might logically have been expected, and then came the Forty-niners and the gold rush to California. And in the last quarter of the century, even before the North American fields had been completely exploited, the South African discoveries moved the vanishing point of gold to an undeterminable but distant date. The attitude that "the Lord will provide" is apparently no very intelligent point of view upon which to erect so vital an edifice as the world's credit structure. Yet thus far, at least, it has always been justified. Without denying the possibility of a gold shortage in years to come, it would appear that a discussion of disastrous failures in the world's gold supply for the time being, at least, belongs more to the field of prophecy than to the field of economics.

Meanwhile, it is the flow of gold between countries that is currently the source of greatest concern. In 1928 and 1929 London experienced a gold shortage, not because of a world famine in gold but because of gold concentration in Paris and in New York. And although the end of the 1929 "bull" market in American securities temporarily readjusted gold distribution, by March, 1930, gold was again moving toward the United States. The international movement of gold (discussed below) is the most pressing of gold problems.

Should a shopper at Macy's or Wanamaker's hand a salesgirl a shilling, a franc, or a mark, it is extremely unlikely that the money would be accepted. Neither would American currency be welcome in London, Paris, or Berlin had not the notorious wealth of Uncle Sam given his monetary units an almost transcendental character. On the whole, however, every country exhibits a determined and a logical preference for the coin of its own realm. You may not approve the foreigner's culture. You may not even speak his language. But when you do business with him, you must translate your currency into his. Money is one of the ultimate strongholds of nationalism.

Since, then, British textiles must be purchased with pounds and French silks with francs, what is the obviously necessary common denominator of all currencies? What is that Esperanto in which money internationally talks? Evidently it is gold, for today nearly every civilized country (China and Mexico are notable exceptions; Japan a recent recruit) bases its financial system upon the gold standard. Without a world-wide gold standard, international trade would be severely handicapped. Gold may indeed be partially defined as that substance which constitutes the medium of exchange in world commerce.

The adoption of a gold standard pledges the adopting country to the maintenance of a gold reserve back of its structure of currency and credit and to a willingness to exchange its notes for gold at their face value. A complete gold standard also implies that there will be no official restrictions upon gold imports and exports, although Canada has at present a gold embargo and in England there has been a definite public opinion against gold exportation. The essential of a gold standard is, however, the maintenance of a gold reserve with which to redeem paper currency at par.



Pictogram

A MAN-MADE RIVER WASHING DOWN GOLDEN SANDS



Pictogram

A DREDGE THAT DIGS IN GOLDEN MUD

The immediate necessity for such a reserve is of course the need for inspiring the citizens of a nation with confidence in their own currency. The proverbial "not worth a Continental" is a reminiscence of the financial difficulties experienced by the infant United States and the inability of the Continental Congress to make good its paper promises to pay. The entire system of modern credit depends upon a gold foundation which supports a structure of wealth many times as large as the actual cash reserve. In the United States, for example, currency and bank deposits are about fourteen times as large as the gold reserve.

In England they are about nineteen times as large. Throughout the world they are about eleven times as large, the lesser breeds without the banking law pulling down the average. Yet the American credit structure is not in the least precarious because of the fourteen-to-one ratio already noted. For the gold reserve actually maintained is ample for all demands made upon it. As far as transactions between American citizens are concerned, the existence of the reserve is automatically conceded, and no American is tempted to take a twenty dollar gold note to Washington to see if he can really get metallic gold for it. So smoothly has our credit system worked, indeed (and before the war so also worked the credit systems of Europe), that there were even those who argued that no gold basis was needed and that the State could create money in the same manner that the Lord created illumination. But of course *fiat* money made small sense even from a national standpoint and internationally made no sense at all.

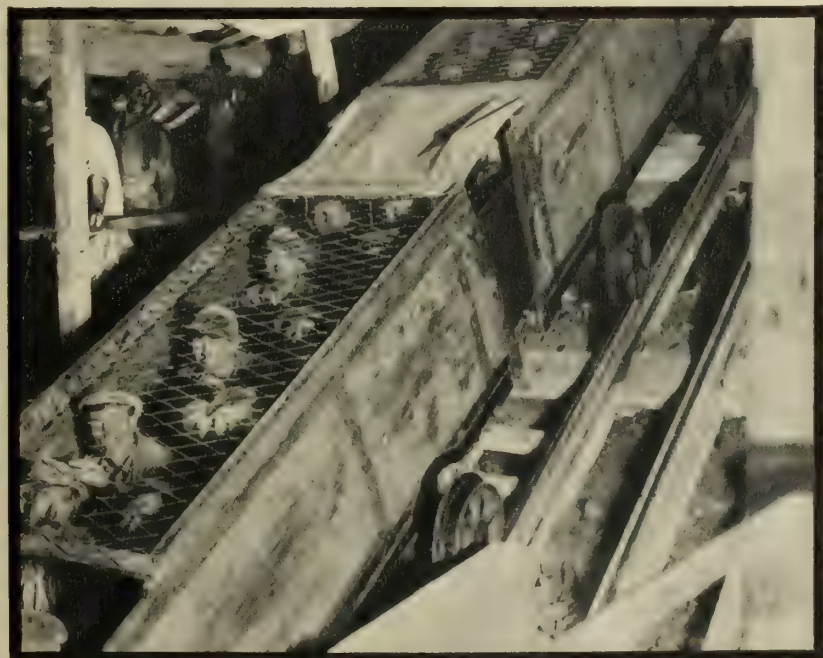
For there is no compelling reason why a subject of King George should accept a demand note signed by Andrew W. Mellon or why a citizen of the United States should place an unshakable confidence in the IOU's of the British Crown. Nor is there any necessity for such an international faith. The United States of America has ordained that in every gold dollar there shall be 23.22 grains of gold, and His Majesty's Government has ordained that in every sovereign there shall be 113.0016 grains of gold. The quantity of gold in a sovereign



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THE "PAY DIRT" OF THE FORTY-NINER

ways be worth exactly \$4.8665622. But as there always is trade and the balance is never even, the \$4.8665622 figure (called the "mint par") never exactly holds. Suppose, for instance, that an English bank owes an American bank \$486,656. According to mint par, the English bank would buy \$486,656 with 100,000 pounds and thus obtain the American money with which to pay its American debt. But dollars, bought in this manner, are a commodity, just as cotton and wheat are commodities, and are similarly responsive to conditions of supply and demand. So when a great many English banks are buying dollars with pounds, and when these purchases outweigh the purchases of pounds with dollars that American banks are making at the same time, then the demand for the dollar is greater than the demand for the pound. Furthermore, the price of the dollar (in terms of pounds) increases. Therefore the British buyer will have to pay more pounds for his dollars, so that a pound will not buy \$4.866 but may buy only \$4.766 or \$4.666. During the worst period of England's post-War depression the pound would only buy \$3.20. England has now brought the pound back to par and the pound-dollar ratio fluctuates chiefly in fractions of cents. But even a difference of a fraction of a cent makes a large difference in transactions involving thousands and totaling millions.

The variation in exchange ratios is indeed the immediate cause of gold movements between countries. We have already



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WORKING A GOLD MINE IS JUST WORK TO THE GOLD MINER



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TAILINGS—SAND LEFT AFTER ITS GOLD IS GONE

seen that the London banker can discharge an American debt by purchasing dollars with pounds. Such a transaction does not involve the actual shipment of gold. But if the London banker chooses, he can take gold in ingot form, ship it to this country, and with it establish for himself a credit in dollars. In other words, instead of turning his money into our money, he can use the gold which is the foundation of both moneys and have it changed directly into United States currency. He will not, however, ship gold when the pound stands at par with respect to the dollar. For in addition to transportation charges, he loses interest while his gold is crossing the ocean. So it is only when the dollar has gained enough on the pound to repay the shipper for the expense of sending gold across the ocean that gold begins to travel away from the British Isles. The point at which the Londoner prefers to ship ingots instead of buying dollars varies with transportation charges and interest rates, but currently stands at approximately \$4.8514. If, on the other hand, the pound should gain on the dollar to such an extent that a pound would buy \$4.887, it would then be profitable for the American banker to ship gold to London. During the first nine months of 1929 the pound was worth less than \$4.85, and gold went from England to the United States. During and after our stock market collapse the pound was worth more than \$4.88, and gold went from this country to England. In March of the present year the pound stood between these two points, although most of such gold as did journey between the two countries was bound for New York.

But to say that gold moves from London to New York when the pound is worth less than \$4.85 and from New York to London when the pound is worth more than \$4.88 does not mean much in terms of the prosperity of manufacturers or the salaries of stenographers. Yet both manufacturer and stenographer are intimately concerned with gold movements. Remembering that business is dependent upon credit and that credit is dependent upon a gold reserve, it is obvious enough that a country must keep its gold reserve in order to keep its financial health. In England, for instance, it was customary for some time to regard 150,000,000 pounds as the minimum reserve consistent with safety. But, on the other hand, the world's gold supply is nearly constant, as gold stocks increase at less than 3 per cent a year, and this addition is used up by the normal expansion of world trade. So, then, the country whose gold supply is being constantly drained away is in much the position of a bank depositor writing endless checks on a fixed capital. The individual checks may be small in proportion to the capital total, but it is not long before the shrinkage becomes noticeable. In the fall of 1929, for instance, London's gold reserve, steadily declining, had shrunk far below the theoretical minimum and stood at some 133,000,000 pounds. The collapse of the American stock market relieved much of the pressure on British gold and thus averted an interesting but alarming demonstration of how far a gold reserve could sink without the country's industry also disappearing from view. But a gold shipment always represents the robbing of Peter for the paying of Paul, and no country can endure too severe a drain upon its gold resources. The English manufacturer and the English stenographer, for instance, might last summer have accompanied each other to the water front and, waving goodbye to another boat load of bullion, thought, "There goes my new factory," or "There goes my new hat."

Nor was there so much more for them to do about their loss than to lament it, for where the results of a gold shortage are

easily summed up in a single word—deflation—the causes of a gold shortage are more complicated and the control of gold movements is almost impossible. In pre-War days there was not much discussion of gold movements and no particular gold problem. For just as the pre-War world enjoyed a military balance of power, so also it enjoyed a financial balance of power during which gold movements automatically reversed and corrected themselves. If, for instance, business was dull in London and booming in New York, there resulted a brisk demand for dollars, a bull market in American securities, and a high interest rate, so that English gold traveled to New York either to be loaned out at good interest or invested in a rising security market. But soon so much outside money came to New York that the supply became overabundant, interest rates fell off, and securities, having appreciated in value, became less attractive as investments. Meanwhile, the loss of English gold made money scarce in England, raised English interest rates, and the combination of the two situations brought English gold back home again. And the same procedure marked gold movements between London and Paris or between Paris and Berlin. Both gold excesses and gold shortages were temporary and self-correcting. International trade was thought of in terms of export and import of commodities and of services (less important were exports and imports of money, especially the exportation of money involved in foreign investments), and no one country became so overwhelmingly prosperous over so long a period that the division of the world's treasure was seriously disturbed.

During the War, however, Europe turned its bullion into bayonets and the Peace left both victors and vanquished on the verge of bankruptcy. It also left the United States with a large proportion of the world's gold and nearly a monopoly of the world's prosperity. Once the United States had recovered from its own post-War deflation (in 1921) and once the post-War machinery of international commerce was again in running order, it became evident that the old balance of power had been seriously weakened. For the first time since the world had organized itself on an international gold standard, a concentration of gold in one overwhelmingly prosperous country appeared inevitable.

Here indeed was the basis for that animus against the United States so generally held throughout post-War Europe—the United States was preëminently the world's creditor nation. Uncle Sam could say, with much justification, that the world owed him a living, but, unlike most people who share this philosophy, Uncle Sam was already rich and the debtor world was poor. Every factor that could operate to bring gold to this country was operating with maximum effect. Gold travels where business is biggest, and business in the United States had for some time possessed all the superlatives of magnitude. Gold travels where business is most active, and the size of American corporations was exceeded only by their rate of growth. Gold travels where profits are greatest, and with a few notable exceptions, such as the Royal Dutch and I. G. Farbenindustrie, nearly all the world's leading corporate earners were concentrated in the United States. Gold travels where interest rates are highest, and for month after month the American call-money market offered the utmost in safety and in turnover, with a yield ranging from 8 per cent to 12 per cent. It was evident enough that the richest country in the world was steadily becoming richer, and to him that had it was being given.

Furthermore the American industrialist, already blessed with a gold surplus and a tremendous production capacity, developed an industrial philosophy which greatly intensified the flow of gold to the United States. This philosophy might



Paul J. Sachs Collection, Fogg Art Museum, Harvard University

"THE JUDGMENT OF PARIS."—A GOLDEN APPLE WAS THE PRIZE IN THE CLASSIC BEAUTY CONTEST WON BY VENUS

be described as a theory of perpetual expansion. Its central premise was the consumer's unlimited capacity to consume. If in one year 4,000,000 automobiles were produced, the manufacturer would put part of his profits into the making of an additional million cars and another part of his profits into higher wages, which would enable the purchasing public to absorb the increase. Thus in the next year 5,000,000 cars would be made and sold, leaving both maker and buyer richer than before and ready for the 6,000,000-car year to come. Last fall, indeed, the limitless consumption idea had reached a point at which the American telephone, radio, and automobile industries, scorning the millennium of a phone, a loud-speaker, and a garage bill in every family, were proclaiming the desirability of the home with more than one telephone, more than one radio, and more than one automobile. Henry Ford was an outstanding expansionist and so was John J. Raskob, who wrote magazine articles about making everybody rich. And expansionism was given an official status by a Hoover economic commission which, in May, 1929, plainly stated and clearly applauded the non-vicious circle of more products making more sales making more products making more wealth.

In the cold, grey perspective of 1930 the expansion theory looks perhaps a bit peculiar, but it certainly worked admirably from 1924 to 1929 and might perhaps have continued to function if it had not fallen into the hands of its too enthusiastic Wall Street exponents. At any rate, from the standpoint of the present discussion, its importance lies mainly in the tremendous impetus which the bull market gave to gold imports. In addition to money owed us abroad, in addition to what might be termed the legitimate money demands of American industry, there developed an insatiable speculative gold appetite. America was financing not only its present but

its future; it was buying today the factories and the production and the distribution of tomorrow. The American market was fascinating gold as a snake fascinates a rabbit and, also like the snake, was still hungry after the rabbit had been eaten. The theory that imports of gold created an excess of gold no longer held, for there seemed not enough gold in the world to satiate the market demand. For every new shipment there was a new financing; the market forever needed "them golden slippers to climb them golden stairs." Thus during the last eighteen months of the bull market, an economist would hardly have required statistics of gold movements to have realized that gold from all over the universe was converging upon Manhattan Island.

If, indeed, we consider the period from June, 1928, to October, 1929, we will see that gold was truly responding to the attraction just described, that the supply of American gold steadily mounted while the supply of European gold steadily decreased. Actual statistics of gold movements, however, presented one apparent contradiction—a contradiction so striking as to seem, in many ways, against financial nature. For while London and Berlin were, as was to have been expected, losing gold to New York, there was no flow of gold from Paris to New York and the French gold reserve, though not as large as the American, was steadily increasing. In fact, London was more worried over the flow of English gold across the Channel than over the flow of English gold across the Atlantic, and where America had formerly been scolded as a Midas, France was now being attacked as a miser. With no speculative excitement, with a low central bank rate, with no claim toward being, like England, the world's merchant, or like America, the world's banker, France was steadily



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A HALF-DOZEN ROOTS OF ALL EVIL

accumulating a gold reserve which became the second largest in the world and was experiencing a gold surplus during a European gold famine.

The French ability to attract gold in the face of apparently adverse conditions is partly explained by the fact that much of the gold going into France was not *foreign money going to Paris* but *French money coming back to Paris*. The post-War franc, like all European currency, went through a marked deflation during which, for instance, American tourists used to plaster their trunks with francs and otherwise indicate their low opinion of French currency. And with the purchasing power of the franc so low, it was obviously more profitable for the Frenchmen to turn their gold into good dollars and pounds than into bad francs. For as soon as a piece of gold became a franc, it could not buy much of anything, but when it became a dollar or a pound its purchasing power was still high. Thus began what was known as the "flight from the franc," that is, a movement of French gold away from its depreciated native currency into the the currency of America and England. On June 25, 1928, the Bank of France itself had 36,308 million francs in foreign bills and balances as against 28,395 million francs in gold reserves; or, in simpler figures, it had 36 francs invested abroad compared to 28 francs in gold at home. And other French banks also had foreign portfolios, filled largely with English securities.

Meanwhile, in 1926, under the able guidance of Raymond Poincaré, the franc had started back toward par, and by June, 1928, had become again stab-

ilized. With French industry recuperating from the War, with a French governmental surplus over outgo, with a tremendous increase in tourist trade, France was experiencing a prosperity which demanded and depended upon the employment of capital. Thereupon the French began to call their gold back home again. In June, 1929, the Bank of France had increased its gold holdings to 36,609 million francs and decreased its foreign balances to 25,971 million francs. In twelve months, therefore, it had acquired 8,000 million francs in gold and reduced foreign balances by 11,000 million francs. Now it had 36 francs in gold to 25 francs in foreign balances, and it had also advanced to French industry some 4,000 million francs. Other French banks were going through the same process of reclamation. Thus it was not so much free gold that came to Paris as loaned gold called back with the return of native prosperity. France also increased its gold holdings by purchases in the open market at London and by a normal flow of gold from Berlin and from London (especially from London), resulting from the franc's favorable exchange position with respect to both the mark and the pound. The strength of the French gold attraction is best measured by remembering that even during the height of market speculation in this country there was virtually no importation of French gold.

With France gaining instead of losing gold, the drain upon other European countries, of course, became even more severe. All over Europe, indeed, interest rates mounted in an effort, largely futile, to keep gold at home by creating a profitable native money market. In 1929 the official bank rate in Rome went to 7 per cent, in Berlin to 7.5 per cent, and in London from 4.5 per cent to 5.5 per cent and finally to 6.5 per cent. London was the greatest gold loser, and in London the gold shortage was particularly demoralizing, both because of Great Britain's former prestige as the world's financial center and because of the very bad British industrial situation which has made unemployment a standing nightmare for every recent British administration. Gold was the only tonic for Britain's sick industry, but gold was crossing both the Atlantic and the Channel as fast as liners could carry it. During July of 1929 gold ingots were moving from London to Paris at the rate of about a million pounds a day.

It was the French as well as the Americans whom the English blamed for their financial difficulties. The English press maintained that France was following a deliberate policy of *hoarding* gold in order to strengthen her hand in any conference of powers, such as, for instance, the recent Naval Conference so quickly ruined by French insistence upon a general guarantee of security. It was



International

MAKING RUMANIAN COINS AT THE BRITISH MINT



Wm. Thompson

LOST GOLD

ECONOMISTS, WHO THINK OF GOLD IN TERMS OF MONEY, ARE MUCH DISTURBED ABOUT THE GOLD THAT IS WASTED IN PRIVATE HOARDS AND PERSONAL ORNAMENTATION. THE ALGERIAN WOMAN PICTURED ABOVE IS A CHEERFUL EXAMPLE OF THE LATTER FORM OF WASTE, AS IS THE DARJEELIAN (INDIAN) WOMAN WITH THE LARGE EARRINGS. THE GOLD IN THEIR DECORATIONS WILL NEVER GET INTO CIRCULATION



Ewing Galloway

certainly undeniable that the French Government was very successful in preventing an inflation which might have stopped the flow of gold, and that there was a heavy tax on profits derived from foreign investments. Possibly, however, France was most interested in resuming her pre-War position as the banker of Eastern Europe and also in making Paris a greater world financial center than it was even in the pre-War days. At any rate, by the fall of 1929, France was soundly prosperous, America was inflatedly overprosperous, and it was the waves only that Britannia continued to rule.

How long the concentration of gold in New York and Paris could have continued without a collapse in London and Berlin is, fortunately, rather an academic question. For, as in the third act of a well written drama, the gold problem received a resounding though perhaps temporary resolution in the collapse of the American market. Early in October of 1929, when the New York market began to totter, gold started back to Europe again, American stocks finally went completely to pieces, and a gold tidal wave rushed back to the countries of its origin. During November and December of 1929 gold streamed steadily eastward across the Atlantic, adding to the surplus of French funds and materially repairing the resources of England. With the arrival of the American market panic a world gold panic was averted.

But, as the final curtain of a play sometimes leaves the audience with a question as to whether the troubles of its characters have been permanently

removed or temporarily postponed, it is hardly possible to say that the conditions existing in the fall of 1929 can never repeat themselves. Indeed, the tide of gold has already turned back toward this country, though not as violently as before, and any large scale resumption of a bull market in America would proportionately reproduce the same situation, though perhaps again with the same reverberating *dénouement*. There

are, however, alleviating factors. It should be a long time before the speculative frenzy in this country reaches anything in the neighborhood of its 1929 fever point. Besides, France has been relaxing its determined grip on the gold within its borders, has recently permitted a considerable flow of gold from France to Germany, and has even become sufficiently international to have a foreign loan floated in Paris. The apparently final settlement of the German reparations question has left the mark both high and stable, and with a release of pressure on English gold Great Britain is in a position to make some progress toward prosperity. Thus the 1928-9 dislocation of gold has been more disturbing than it has been disastrous. It has left New York the permanent capital of the financial world; it has left France a more prosperous country than Great Britain. But with the return of normal conditions in world finance the temporarily discredited system of a gold balance between nations should again assert itself. It will not, perhaps, be a very even-handed Justice, and her scales may tip heavily toward New York. But not so heavily that a reasonable foreign equilibrium cannot be maintained.



Publishers Photo Service
SIAMESE DANCERS, HEAVY WITH GOLD

Railroads Electrified

With particular reference to the Pennsylvania.

WEBSTER defines the verb, "to electrify," thus: "To excite suddenly and violently... by something highly delightful or inspiring; to thrill." Such a definition applies to many a prophetic vision of the electrification of our railroads, many a dream of the future, in the manner of H. G. Wells, with monstrous electric locomotives noiselessly shooting across the length and breadth of the land. That this vision will some day materialize, no one doubts. But for the present, and for a good piece of the future, railroaders prefer a more prosaic definition: "To equip for employment of electric power."

Railroad men prefer this calmer definition, not because they are sceptical of the enormous possibilities of electric power in their profession, but because they know that steam still is, and will for some time remain, the chief source of railroad power. There have been electrified in the United States only about 1,800 miles of line, which is not even 1 per cent of the total mileage. Europe leads the United States in electrified mileage, Switzerland alone having nearly 1,500 miles operated by electricity.

Cost.—Electrification has spread no farther because of the most cogent of reasons: its cost. To electrify a mile of track is costing the Pennsylvania in the neighborhood of \$77,000. An electric engine costs from \$100,000 to \$175,000; a steam engine from \$40,000 to \$150,000. Once installed, electric power is cheaper than steam.

Power.—Not long ago in Erie, Pennsylvania, three Titans had a tug-of-war. Two huge Mogul steam locomotives were coupled to an electric engine and started down the track. When they had reached a speed of about fifteen miles an hour, the electric engine was started in the opposite direction. The steam locomotives began to move more slowly, came to a dead stop, and then, puffing furiously but in vain, with drivers whirring impotently against the rails, the mighty pair were slowly dragged backward.

Thus did electricity dramatically demonstrate a transportation efficiency superior to steam. The electric engine won its victory not because it was more powerful (as a matter of fact, its rated horsepower was somewhat less than that of its opponents) but because it made better use of its power. A steam engine receives its power at intervals, whenever a piston is thrust out and sets driving-wheels in motion. An electric motor, on the other hand, has an uninterrupted flow of power at all times. A steam engine travels under momentum half the time between thrusts. An electric engine never has a second of inertia.

Efficiency.—By every canon of operating efficiency, electricity is more effective than steam power: an electric engine will haul more cars than a steam locomotive. It will pull them up higher grades, and it will whirl them along at a faster clip. It makes less noise and no smoke. It

does not need to be taken off duty every few hundred miles and "rested up" as do steam engines. If the *Twentieth Century* were pulled by electricity, one locomotive could make the entire run instead of the three that now split up the run between them.

As a source of power the generating station is much superior to the coal tender. The steam railroad is like the camel which conveys its own sources of energy on its back. To supply fuel for their own purposes, our railroads last year pulled 2,100,000 loaded coal cars, containing a total of 114,000,000 tons of coal. One out of every ten cars hauled was filled with coal for the railroads themselves. Last year the railroads burned more than 27 per cent of the soft coal produced. These figures have their roots in this fact: the most efficient steam locomotive must burn four pounds of coal to produce one horsepower for one hour.

On the other hand, the average steam-electric generating station in this country burned last year 1.66 pounds of coal to get 1.33 horsepower for one hour. That is, the average generating station used less than one-third as much coal to produce a horsepower hour than did the most efficient steam locomotive. In the aggregate, our steam railroads last year burned two and one-half times as much coal as did the electric plants to produce about 10 per cent less power.

Projects.—Electricity stands ready to give the railroads efficiency if they are willing to pay for it. Whether any given railroad is willing to pay the price depends on how great is its need. There are three railroading problems which electricity solves with particular skill: grades, tunnels, and congested traffic. Some eclectic notes on outstanding jobs of electrification would include:

Central-New Haven.—The use of electricity by railroads received its first big impetus when the New York Central and the New York, New Haven & Hartford electrified their lines in the Grand Central Terminal district during 1906 and 1907. Their main object: elimination of smoke and noise.

Virginian.—When the late Henry H. Rogers bought the Virginian, he found himself with a serious traffic problem on his hands. For more than 134 miles the road travels up steep grades and over narrow and precarious footholds through the Blue Ridge Range. Though the Virginian had the shortest route from the coal fields to the seaboard, it was losing business to other carriers because its single track through the Blue Ridge was inadequate. But the cost of double-tracking the stretch would have been prohibitive. Electrical engineers told Mr. Rogers that electric engines could be built that would haul twice as many cars twice as fast through the Blue Ridge as his steam locomotives could. In 1926, the

electrification was completed. Operating costs in 1924 were forty cents per hundred net ton miles; in 1927 they were thirty-five cents, a 12.5 per cent reduction.

St. Paul.—The Chicago, Milwaukee, St. Paul & Pacific has at present the greatest electrified mileage of any road in the country: 658 miles. It invokes the god or demon of electricity to haul its trains over the steep grades of the Rockies. The Milwaukee electric engines have a peculiar feature: the motors act as generators as they go down hill, returning power to the lines. Not long ago a heavy freight train was sent rolling down the western slope of the Cascades, and all current from the central station generators was shut off. The freight engine returned so much power to the line as it went down the western slope that it was able to pull a passenger train up the eastern slope.

Reading . . . Lackawanna.—At the moment the East is the seat of electrification activities. The Reading is spending \$20,000,000 on electrifying its lines in the Philadelphia metropolitan area. President Dice has stated that when this is completed, early in 1932, his road expects to set about electrifying its New York-Philadelphia lines. The Lackawanna is spending from \$14,000,000 to \$18,000,000 on the electrification of 173 miles of track in northern New Jersey. The job should be finished this summer. These are ambitious undertakings, but they are overshadowed by one of much greater scope.

Pennsylvania.—On October 31, 1928, General Atterbury announced that the Pennsylvania would spend \$100,000,000 in the next eight years on electrification. The project takes in 325 miles of line and 1,300 miles of track, extending from New York to Wilmington, Delaware, with a spur at Philadelphia westward to Atglen and Columbia, Pennsylvania. Last fall the project was extended to Baltimore, and Washington was indicated as its ultimate goal. Work is going on now on the Philadelphia-Columbia section, which General Atterbury sees as "the first step in electrification to Pittsburgh." For use on the network of electric lines it expects to be operating in a few years, the Pennsylvania will need 150 locomotives. Their horsepower will be 6,000 (as against the present 4,000 rating of big Pennsy locomotives), and their cost will be \$16,000,000.

"This electrification will far exceed in magnitude and in importance that of any other railroad in the world, in miles of track to be electrified, in volume and density of passenger and freight business handled, in size and amount of equipment required, in the number of trains affected, and in terminal operations involved." The speaker is General William Wallace Atterbury, chief of the huge, efficient Pennsylvania system, vigorous interpreter of what he likes to call the "art" of railroad electrification.



Courtesy of Pennsylvania Railroad Co.

PORTRAIT OF GENERAL WILLIAM WALLACE ATTERBURY

BY SIR WILLIAM ORPEN

The Case of William Fox

A *cause célèbre* of modern finance, which has plunged both bankers and lawyers into heroic struggles, is (here for the first time) dissected, rearranged, and spread out in coherent and comprehensible form.

WHEN, on April 7, 1930, the announcement was made that General Theatres Equipment, Inc., had purchased from William Fox 150,101 shares in Fox Film and Fox Theatres, one of the most extensive and bitter litigations in corporate history apparently came to a conclusion. Fought between Mr. Fox and supporters on the one hand, and Mr. Harold Leonard Stuart of Halsey, Stuart & Co., Inc. and Mr. John Edward Otterson of Electrical Research Products, Inc. on the other, the conflict resulted in an unmistakable victory for the Stuart-Otterson forces. For the issue at stake was precisely the 150,101 shares owned by Mr. Fox (carrying with them control of the Fox companies), and General Theatres Equipment, Inc., purchaser of these shares, had long been allied with Halsey, Stuart. Closeness of this alliance was demonstrated by the fact that in the plan of Fox financing prepared by Halsey, Stuart, the new Fox Film common was to have been underwritten by General Theatres. Therefore what Mr. Fox had long been protesting against—the removal of the companies from his personal control—had been accomplished, and his surrender was mitigated chiefly by the purchase price of his holdings—a price not announced but rumored at \$18,000,000. New financing of the Fox companies would include both Halsey, Stuart & Co., and the Blair syndicate. Back of this presumably final development, however, lay a long and complicated tangle, revolving about the now famous Trustee agreement of December 3, 1929. It is with the circumstances immediately preceding the signing of this agreement that any coherent statement of the Fox litigation necessarily begins.

At the London end of a transatlantic telephone sat Winfield Sheehan; at the New York end sat William Fox. Mr. Sheehan was vice president and general manager of Fox Film Corp. and has at Beverly Hills a large house with a sunken garden and a library ceiling imported from Spain and a rusty cowbell which he jangles to summon his servants to bring dinner on golden plates and also in golden goblets. Mr. Fox was the president of Fox Film and Fox Theatres and was the biggest cinema man in the world and wears white socks with high black shoes and appears at formal meetings with a sweater under his coat. He has an estate, too, at Woodmere, Long Island, where he keeps a remarkable collection of musical instruments from the harpsichord of the 16th century to the saxo-

phone of the 20th. But Mr. Fox and Mr. Sheehan were not talking about golden plates or golden notes. Their conversation was held late in November, 1929, which was just after securities on the New York Stock Exchange had reached the low points in their famous 1929 decline. Mr. Sheehan had heard (through previous transoceanic phone communication with other Fox officials) that the collapse of the market had produced a near-collapse in the Fox financial structure. "What," said he, in effect, "is wrong and how wrong is it?" "Nothing," replied Mr. Fox, in effect. "There is no danger and everything will be all right." Still perturbed, however, Mr. Sheehan scanned sailing lists, packed bags, and on the following morning took the *Majestic* home. Arriving in New York at 7:30 P.M. on the evening of December 3, 1929, he hastened off the boat, jumped into a taxi, proceeded immediately to the Fox apartment at 270 Park Avenue. There he found no sackcloth, no ashes, but a beaming and confident Mr. Fox who vehemently informed him that such troubles as had existed were over, that Halsey, Stuart & Co. and the American Telephone & Telegraph Company had come to the rescue, and that on the very afternoon of Mr. Sheehan's arrival Mr. Fox had achieved the master stroke of a career in which many a *tour de force* had already been recorded. For on that day he had signed an agreement establishing three Trustees as guardians of his companies, and of the three Trustees one was Mr. Stuart of Halsey, Stuart, one was Mr. Otterson of Electrical Research Products (American Telephone & Telegraph subsidiary), and the third was Mr. Fox himself.

It is difficult now to see why Mr. Fox was so pleased with his agreement, because while it undoubtedly enlisted the financial support of the banking house and the telephone company, it also left Mr. Fox a minority representative on what virtually amounted to a new board of directors. Indeed, Mr. Sheehan was apparently not so easily reassured, because it was not until four the next morning that their meeting ended. But the entire Fox litigation is filled with incomprehensibilities. It is a cinema story by name, by nature, and by the millions of dollars carelessly handled and hopelessly involved—a drama become incurably melodramatic. Hardly a week after his signing of the December third agreement, Mr. Fox was firmly convinced that Mr. Stuart and Mr. Otterson had been wolves in sheep's clothing, and that back of their apparently friendly assistance lay a nefarious plot to rob him of his companies. Hardly two weeks after his meeting with Mr. Sheehan he was

equally convinced that Mr. Sheehan had betrayed his trust, had gone over to the enemy, and with them was seeking his ruin. Thus the whole complicated tangle of conflicting rights and interests and personalities and justice was transformed into a great super-special, a talking-movie projected on a Grandeur screen before a Roxy audience and with the hero v. villain characterization so typical of its kind. Perhaps the simplest method of reviewing the Fox litigation is, indeed, to trace it somewhat in its motion-picture aspects, remembering, however, that such a procedure inescapably selects Mr. Fox as the central figure, and interrupting the progress of the narrative at points during which accusations of trickery, fraud, lying, and villainy are hardly adequate explanations of the complicated factors involved. And let it be also remembered that the December third agreement, signed by Mr. Fox and putting at the disposal of the three Trustees (*or majority of them*) control of the voting stock in both Fox Film and Fox Theatres, remains distinct from and superior to the questions of motive and character and intention into which the Fox litigation has so pointedly proceeded.

Like all motion pictures, the Fox picture has a hero (it unfortunately lacks heroine or love-interest), and of this picture the hero is certainly Mr. Fox. We see him first on the New York East Side, the child of Jewish immigrants from Hungary, one among the thousands of Manhattan tenement dwellers destined apparently for the pushcart or the sweatshop. At that time the family name was reputedly Fuchs, and Fuchs Sr. earned a very meager living by the manufacture of shoe polish, which he concocted over the stove in the family kitchen. Young William Fuchs sold the shoe polish, also sold newspapers, outwardly resembled most of the other young inhabitants of the Ghetto, except for a physical disability which left him even more than ordinarily handicapped. A broken arm, crudely set, never again recovered its normal usefulness, although today Mr. Fox plays at least as excellent golf as most of his business contemporaries. After selling shoe polish and newspapers, Mr. Fox worked in a cleaning-and-pressing establishment and advanced to a salary of \$17 a week. Asking for a raise, he was informed that he really was worth only \$15 a week, so, disgusted with the pressing business, he took \$1,600 (saved from his salary) and, with two partners, bought a little motion picture house in Brooklyn. This purchase (made in 1904) started Mr. Fox on his way to cinema kingship.

Mr. Fox's extremely humble origin of course fits excellently the cinema formula; from a less sentimental standpoint it is also important as explaining much of the extreme ego characteristic of the more mature Mr. Fox. It may be a good thing for a man to start from the bottom, but it is not such a good thing for him to start from a subcellar. For obviously he will be afflicted with a terrible inferiority complex, and although he may make of that very inferiority a driving power forcing him toward a success, he is bound to do his climbing with a chip on his shoulder and to retain an individualistic and a belligerent attitude long after he has reached the top. Mr. Fox has never been an enemy of society, but society was for a long time an enemy to him, and the old resentment is still lasting like death. Mr. Fox does not attend a formal meeting in a sweater because he imagines that a sweater is an appropriate garment for such an occasion. He wears a sweater because he knows that whether it is approved or not it is going to be accepted because he is wearing it, and that men who would once have refused him admittance in full dress would now be pleased to receive him in overalls. Newspapermen have frequently commented upon the fact that on those rare occasions when Mr. Fox consents to meet the Press, he disregards the immediate business of the interview in favor of a long preamble on his Rise from the Ranks, any interruption of which is likely to result in a door slamming upon the departure of an indignant cinema potentate. At the height of his success, in the full confidence of his powers, Mr. Fox was able to negotiate with Park Avenue and Wall Street on friendly and equal terms. In a crisis, however, and confronted with a division of interest between himself and his highborn associates, ancient suspicion and half-obliterated distrust were bound to reassert themselves with overwhelming force. It is important to remember Mr. Fox's early environment, for his struggle to overcome it explains much of the one-man character of his business, of his complete confidence in his personal signature as a method of raising money, and of the bitterly personal animus in his present attitude toward his former friends.

Returning to the narrative of the Fox career, however, it is perhaps feasible to dismiss the period from 1904 to 1925 as a time of gradual but unbroken progress, a progress which had brought Mr. Fox to a prominent, but by no means a dominating position. He had a producing company (Fox Film), a theatre company (Fox Theatres), and a distributing system through which Fox films were shown throughout the country. At that time, however, Mr. Fox controlled comparatively few theatres, his pictures were not considered of major importance, and Theda Bara had been his outstanding star. Mr. Fox had made mostly western pictures, full of cowboys and Indians, and vampire pictures, full of Miss Bara, with occasional excursions into such bypaths as, for example, Annette Kellerman with a great deal of bathing-suit footage. But the people liked Mr. Fox's pictures, even if the critics did not, and as his films were turned out quickly, economically, and with a minimum of high-priced actors and actresses, they were bringing Mr. Fox a steady income and piling up a surplus for the expan-

sion period which he was about to begin. His main assets in this expansion were Mr. Sheehan, who as general manager was gradually improving the quality of his pictures, and his own ambition, supported by his personal control of both his companies. All voting power in Fox Film lay in 100,000 shares of Class B stock, of which Mr. Fox owned 50,101 shares. All voting power in Fox Theatres lay in a corresponding 100,000 shares of Class B stock, the entire issue of which belonged to Mr. Fox. With a directorate that opened him to a charge of nepotism and the ability to shift directors and executives at his pleasure, Mr. Fox was well able to demonstrate the extraordinary efficiency inherent in a thoroughly centralized control. Securing additional capital by issuing Class A non-voting shares in both Film and Theatres, Mr. Fox began producing better pictures, adding new theatres, and by the close of 1926 had brought out *What Price Glory* (his first "super" film).

In 1927, still expanding, Mr. Fox began to buy theatres by the chain instead of by the unit and also began to experiment with the talking picture. His more ambitious expansion made it necessary for him to have a banker. Thus upon the scene arrived Halsey, Stuart & Co. and Harold (commonly known as Harry) Leonard Stuart, its president. The talking picture brought Mr. Fox into contact with applied science, thus saw the beginning of his connection with Electrical Research Products (American Telephone & Telegraph subsidiary) and its president, John Edward Otterson. It is at this point, therefore, that the two other major actors are introduced (with Movietone theme music from *Mephistopheles*) to begin the association so violently terminated some three years later. It should be noticed, however, that Mr. Stuart and Mr. Otterson were not working together, recent court proceedings having brought out the fact that the banker and the utility man had not seen each other for some five years before they met to solve Mr. Fox's difficulties.

Both Mr. Stuart and Mr. Otterson were sufficiently opposite types from Mr. Fox. Mr. Stuart was the head of a conservative and long-established banking house, the most radical innovation of which had been the introduction of radio advertising. Halsey, Stuart & Co. had always been considered an excellent bond-selling organization, had never shown a disposition to manage the affairs of the companies whose issues it handled. Its most conspicuous connection was with the utility interests of Samuel Insull, and Mr. Insull's companies were notably not of a type whose bankers either rescue or absorb them. Mr. Stuart and Mr. Insull were (and remain) close personal friends, meet frequently at the exclusive Chicago Club, and have several times gone abroad together. Thus Mr. Fox was a new kind of client for Mr. Stuart, just as Mr. Stuart, with his perennial carnation and his quiet correctness, was perhaps a new kind of associate for Mr. Fox.

Mr. Otterson, less the metropolitan clubman than Mr. Stuart, was still not nearly as self-made as Mr. Fox. Graduating from Annapolis in 1904, he served in the Navy until 1915, then superintended the manufacture of Winchester rifles, whence he traveled to Electrical Research

Products by way of Western Electric. Some 70 cinema studios and 3,764 theatres have been equipped with talking cinema machinery by Electrical Research Products, which has installed 57 per cent of the vocal picture apparatus now in use. Mr. Otterson is very dignified, very good looking, very reticent, noted particularly for the qualities of shrewdness and tenacity. He used to commute between New York and New Haven (where his family lives and where he was once head of the Chamber of Commerce), but now has a New York apartment and goes home only for week-ends. It was with Mr. Otterson that Mr. Fox first fell out, and it appears to be the telephone company, rather than the bankers, whom Mr. Fox considered the more menacing graspers for his properties.

In 1927, however, Mr. Fox, Mr. Stuart, and Mr. Otterson were good friends and associates, and it was under their auspices (but particularly Mr. Stuart's) that what Mr. Fox refers to so frequently as his "great enterprise" came to its fullest bloom. In 1927 and 1928 the Theatres company bought the Roxy circuit (including the 6,200-seat Roxy Theatre), the Poli chain of 20 New England theatres (price: \$25,000,000), and some 313 theatres in New York, New Jersey, and Ohio. The Film company also bought many theatres, notably Wesco Corporation, controlling 216 theatres, chiefly in California, and also with a one-third interest in First National Pictures. Meanwhile Mr. Fox, introducing the Movietone in 1927, had pushed the talking film so vigorously that he shared talking-picture honors with Warner Brothers (whose Vitaphone had preceded the Movietone by about twelve months), and early in 1929 was able to announce that henceforth all Fox pictures would talk and that the silent film, from the Fox standpoint, was dead and gone. The Speaking Likenesses, of course, tremendously accelerated Fox (also Warner) progress, as they rapidly made obsolete the quiet cinema, and the old methods and old reputations of longer established producers became a handicap rather than a help. So by the end of 1928 Mr. Fox had risen to a position of prominence among the Big Four of Cinema (Warner Brothers, Paramount, Fox, Loew). During this period the Fox financing had not become frenzied, Mr. Stuart had done nothing more radical than the endorsement of some second mortgage bonds, and both he and Mr. Otterson (busily installing Movietones) were well pleased with their cinema friend.

In 1929, however, came the period of Mr. Fox's greatest glory and came also the events which later resulted in his present predicament. Comparing him (probably not to his displeasure) with Napoleon, 1929 might be termed his Moscow year, although Mr. Fox was not nearly as reckless as Napoleon and won a far more complete victory. He did, however, embark upon an expedition a bit too expensive for his resources, and he certainly retreated from it in extremely bad order. That expedition was the Loew purchase, followed by the Gaumont purchase, two items of expansion which made his cinema tower unquestionably the tallest in the world, but left it also with a marked divergence from the perpendicular.

[Continued on page 108]

Wine

A definitely aristocratic business—yet with some Democrats in Burgundy bottles—and the Argentine Navy steams across the Atlantic to salute M. Jean Calvet.

THE philosophy of the American includes beer and spirits but not wine. Yet observe this paradox: our substantial people have immense respect for the man of wealth who adds to his business acumen and his flair for sport a knowledge of the niceties of wine. Indeed no other hobby of the business man is so definitely and quietly aristocratic. The small banker does not know whether Château d'Yquem is red or white (or indeed whether it is a wine), but he knows that the great banker does.

The great banker is aware that champagne is the least esteemed of great wines among connoisseurs, though it is the only one America imports on a mass bootleg basis. He may have smiled at the recent and somewhat circulated *mot* of that slightly dissolute *flâneur*, Prince Aage of Denmark. Said His Royal Highness with uncommon wit: "A night of champagnes at the Paris *boîtes* is like running from house to house licking dusty windowpanes—the taste is practically the same."

Business may have forced the man of large affairs to pick up what he knows of wine in Paris, London, or, worse still, Berlin. But as he sips a glass of the king of all red wines, his eye may linger on the label. "Château Lafite-Rothschild," he reads, and above the steel engraving on the quaint, old-fashioned hallmark, "Mis en bouteille au Château."

Perhaps the Rothschilds themselves may have chanced to mention their wine. They may even have invited him down to Lafite for the shooting. But he had to catch the *Bremen*. Some day, though, on his way motoring down to Biarritz, he means to have a look at the most aristocratic business on earth. In the Bordeaux wine country many a shabbily dressed proprietor is a rich authentic Grand Seigneur. The wine turnover for France alone is more than a billion gallons yearly.

Billion, Million, and 1/15,000th

In the city of Bordeaux the discreetly famous Hôtel Montré is the place to stop, an astonishing old hostel with suits of complete armor standing in the halls, pikestaffs and lances sprouting everywhere, walls fairly dripping swords, and several parlors furnished with antiques upon which the merest guest may sit, though the owner deems them priceless and will not sell. Directly across the narrow street stands what any Bordelais will tell you is the "First Restaurant in Europe," Le Chapon-Fin. Suppose we dine there and turn in early.

Next morning our dusty Farman glides down the left bank of the Garonne ("*Une Voiture Roule, la Farman Glisse*"). Less than 1/15,000th part of the annual French billion gallons of wine is produced by the three châteaux without peer we shall visit this morning: Château Lafite (21,000 gallons); Château Latour (22,000 gallons); and Château Margaux (21,000 gallons), all of red wine. These are the *Premiers Crus*, the "First





VINEYARD—BY CHARLES EMANUEL BÉNÉZIT

Growths." They top the hierarchy of five *crus*, five ranks of vinous nobility, the most exclusive in the world, which altogether grow a scant million gallons yearly, every drop precious to the man of taste.

Sublime Lafite

We have now motored almost to the end of the famous red wine district of Médoc, and our car enters the spacious grounds of Château Lafite.

Its present owners have quite superfluously added a hyphen and their famous name to the label of this sublime, majestic wine. But no connoisseur has ever been heard to take them seriously by calling for a bottle of "Lafite-Rothschild." The owners are, of course, the Barons de Rothschild: Edmond, Edouard, and Robert.

The long low building at the right (see photograph) contains the machinery for separating the grapes from their stems, and the large wood-lined steel presses, from which the

juice flows through glass pipes to the initial fermentation vats. Even to this highest altar in the temple of Bacchus the machine age has come!

Similar machinery is used at all the châteaux of the *Grands Crus*. Oddly enough, one hears very little grumbling among connoisseurs that wine trodden out by the human foot as of old would be better.

The low buildings to the left are the *caves*. These cellars contain in a special vault a treasure unique and priceless: the so-called "library" of the Rothschilds, with a bottled first edition of every Château Lafite vintage since 1797, a span of 133 years! Cheap enough was the price paid for both château and library in 1868, namely 4,500,000 francs or \$900,000, which probably represented in purchasing power then at least \$2,000,000 now.

Because they are absentee landlords, and because they keep up Lafite with elaborate, expensive, even extravagant care, it is said that the Barons de Rothschild actually manage to lose

NOT FOR
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a little money on the property. When you pay 25 shillings for a bottle of Lafite at the Savoy Hotel in London, consider that the Rothschilds have made you a small gift.

Proud Mouton, Poetic Margaux

Turning back toward Bordeaux, we barely pause at the Château Mouton-hyphen-Rothschild, commonly held to be the best of the *Second Crus*. Indeed its ancient, proud, pre-Rothschild motto reads:

*Premier ne suis, I am not first,
Second ne daigne, Second befits me not,
Mouton suis! Call me Mouton!*

The Rothschilds have given Mouton the only modernistic label stooped to by any of the hoary *Grands Crus* (see page 55), and they have put their armorial arrow with four tails up on the château's lightning rod for a weather vane. But then the Rothschilds have always been incorrigible.

Speeding on down the dusty road, we come to Château Latour. One *cave* is like another. And Count René de Beaumont is almost as much an absentee landlord as the Rothschilds. We pause merely to taste the "young wine," lying in casks as it must for three years before being bottled. Then on past the famous gate of Les Trois Léovilles to stark-white, classic Château Margaux (see photograph).

This last of the three *Grands Crus* is the only one strictly business. It was bought some years ago (1920) by a syndicate, which employed as manager M. Pierre Moreau, an astute and energetic man. He now owns the controlling interest. He has piles of free postcards ready for visitors to write and mail. He has stacks of little handbills with a picture of the château displayed above a long, eulogistic poem which calls Margaux the "King of Kings!"—that is to say, superior to Latour and Lafite. But though successful, M. Moreau deserves your sympathy.



L'illustration
"LES ROIS DES CRUS": ANDRÉ GILBERT (HAUT-BRION), PHILIPPE DE ROTHSCHILD (MOUTON), COUNT RENÉ DE BEAUMONT (LATOUR), PIERRE MOREAU (MARGAUX), BARON ROBERT DE ROTHSCHILD (LAFITE), AND THE MARQUIS DE LUR SALUCES (YQUEM)

He has lost his only son. He is getting on. It is not thus that a Frenchman wishes to die, who sees the vine resurrect itself every spring. Among his neighbors he is called a sad and stricken man.

In contrasting the three *Grands Crus*, it is commonly said that Margaux is the most delicate and poetic. Latour is the most richly spacious, with a glorious aftertaste. And Lafite is said to be in flavor and bouquet a grand symposium of all the virtues, being in fact hailed as the "King of Kings," though in bad years it certainly does not deserve the title.

The Patriot of Haut-Brion

Our next stop is at the famous Château Haut-Brion in the suburbs of Bordeaux. Here we meet an old man said to be short-tempered. But this must be one of his good days, or perhaps people are quite wrong. M. André Gilbert greets us with every courtesy. We forget that he is slender with the frailty of years, for he speaks with animation, even humor, and after a while he

asks us minutely, and with a visible effort to understand, why Americans want prohibition of wine.

He soon has us in a corner, and the best that we can do is to explain that Americans in the mass have never tasted wine, know little or nothing about it, and suppose that it is like gin or whiskey, only not so alcoholic. (For a note on the nature of wine, see page 124.)

M. Gilbert, after showing us about the old château, shakes our hand at parting with perhaps an added warmth: "Now for the first time I begin to understand your countrymen. I had supposed that for some reason, I could not conceive what, they did not like good wine. I imagined that some mad superstition—perhaps a heritage from the Indians—made them think good wine would hurt them. But this idea did not satisfy me. Surely,

I thought, many of them must have drunk enough to know that wine nourishes and ennobles. But you tell me that so many have never even tasted it! I begin to understand. But you, Monsieur, and the other Americans who sometimes visit me, when you all go home why do you not tell your countrymen the truth about good wine?"

If we have in any way deceived M. Gilbert, we are ashamed. He is a patriot. To save the great vineyard of Haut-Brion (for Bordeaux is growing so fast that his winelands could soon be sold at a fabulous profit as building lots), he has willed it to the city on condition that its vines be tended forever. (Parisian vineyards once covered the sites of the night clubs of Montmartre, and the Théâtre Odéon now stands where the once famous wines of Clos Bruneau grew.) Although Haut-Brion is strictly speaking in the Graves, connoisseurs and wine merchants rank it with the three *Premiers Crus* of the Médoc, and some call it fervently "the greatest of all red wines!"



NEW WINES MATURING. LEFT, *GRAND VIN*; RIGHT, *VIN ORDINAIRE*

Splendid Sauterne

Next day our exceedingly dusty Farman does its internationally advertised *glisse* from Bordeaux up the left bank of the Garonne through first the large Graves and then the small Sauternais. Up river is white wine, down red (see map). As we approach Sauternes, the wines become sweeter. Indeed the Graves wine of Château Carbonnieux is so astonishingly dry and colorless that in former times a Bordelaise, who had become in Constantinople one of the Sultan's odalisques, is said to have slipped her favorite wine past the customs officers of dry Turkey by instructing the shippers to label it *Eau Minérale de Carbonnieux*. Nearby is the Château Pape Clément. Its wine commemorates the refuge France gave to Clement V after the Papal flight from Rome.

But we are approaching splendid Sauternes. No one who has merely drunk the worst of this wine on dining cars, and the next worst at ordinary hotels, has the faintest conception of that glorious, well-nigh overpowering volume of flavor and perfume which sweeps up from a true and great Sauterne. Even the "new wine" of Château d'Yquem has such a quality of pure delight that your average visitor, after drinking a single glass straight from the barrel, rushes in a transport of emotion to one of the enormous visitors' books and writes his praise in terms which would sound absolutely daffed if set down in print.

Intoxication is not the point. Any cocktail contains far more alcohol than a glass of Château d'Yquem. But upon thousands and thousands of people, generation after generation, the effect is the same. In Europe the Château d'Yquem has been regarded for very many years as something more than a vineyard, almost as a shrine of taste. The long roll of peasants, clerks, counts,



S. K. S. News Service

M. JEAN CALVET: BIG BUSINESS

business men, princes, tycoons, kings, presidents, and tsars who have made this slightly long and slightly inconvenient pilgrimage is crowned for the present with the enormous signature of His Most Catholic Majesty, Alfonso XIII, King of Spain.

Wickedest wine; Château d'Yquem

It so happens that the owner of Château d'Yquem is an authentic Grand Seigneur, the

Marquis Bertrand de Lur Saluces, a son of sires upon whose ancient lineage it is needless to insist. A young brisk man of about thirty, he makes it his business to see that Yquem returns a net profit every year of at least one million francs. He also gives efficient care to several other estates.

We find the Grand Seigneur living from choice in a very tiny, though comfortably furnished, second floor apartment in Bordeaux, with one valet and two dogs. It is a mere but significant coincidence that, as we enter, there lies freshly open on the Marquis' desk a pale blue telegram from Brussels, from the exiled Dauphin, Henri of France, joyously informing the Lord of Château d'Yquem that he, the Dauphin, has just been created "Count of Paris" by his father, the Pretender to the Throne of France, the Duc de Guise.

In the course of conversation the business man, with a net of a million a year, tells us that he believes 5,000,000 Frenchmen would support the Duc de Guise with arms should "His Majesty" proclaim the restoration of the Monarchy, and that at least 10,000,000 more would welcome the change: "But mind, I am saying only what I *think*. No one knows. I think that a restoration may become possible, but for the present it is scarcely probable."

Our mind's eye passes from the Marquis and the telegram to Château d'Yquem itself. It is a little Carcassonne, a residential fortress with towers and bastions which have seen war and siege (see photograph). There is a painting in the hall which shows the stout gate beset by men at arms. Today this is all as empty or as stirring as the title, "Count of Paris." Is one stirred?

The wine presses and *caves* are in long, commonplace, comparatively new buildings outside the fortress walls. But at least there is still



CHATEAU LAFITE-ROTHSCHILD: KING OF REDS

romance in the wine! Here at Château d'Yquem the grapes must hang in the blazing sun until they are ripe, then overripe, and finally until you would say they were absolutely rotten. Then, grape by grape, the precious globes, their skins drooping and so thin that they seem ready to burst with the weight of the sweet liquorish juice, are plucked and carried hurriedly to the press, and the screw is gently turned. It is all as monstrous, and the result is as superb, as the overfeeding of geese to make their livers swell and become *pâté de foie gras*. Certainly the best and most wicked luncheon in the world is a lettuce salad and a *pâté*, washed down with Château d'Yquem 1921. The poor grapes, the tragic geese, the noble head of lettuce decapitated in its prime!

Big Business and wine

Who shoulders the enormous task of distributing the many million gallons of best and ordinary beverage wines produced annually about Bordeaux? We have not met any château proprietor thus far who seemed exactly suited for this business. The Marquis Bertrand de Lur Saluces does not wish to be distracted by further cares from his hobbies of yachting and writing a history of Russian literature in Russian (and to study Russian he has to commute every week up to Paris and the Sorbonne). Somewhere the

elegant business of owning a château must be buttressed by Big Business. It is. The warehouses of the great, historic wine shippers of Bordeaux line the quais of the Garonne, whence good wine has set sail on a Big Business basis at least since the 12th century. Among honored names are Louis Eschenauer, J. Calvet & Cie., N. Johnson & Fils—and one could extend the list.

Arbitrarily we choose to speak of the House of Calvet, and in the devotion of this family to wine there is something reminiscent of the Japanese House of Mitsui which, as was pointed out in the March FORTUNE, has made of trade and banking almost a religion.

Without exception all four sons of M. Jean Calvet have entered and are busy with responsible positions in the firm. The eldest heads the Argentine branch, and beside this stands a tall story. The first agent sent by the House of Calvet to Buenos Aires, almost a century ago, became so impressed by the possibilities of real estate speculation that he squandered all the sums entrusted to him on likely plots, and presently returned to Bordeaux extremely penitent, a confessed embezzler, with nothing to put in his employers' hands but the deeds and titles to real estate which was then frozen solid, impossible to liquidate.

Many years later the House decided to ascertain what it possessed in Buenos Aires for, being

immersed in their wine business, the Calvets had all but forgotten that they owned real estate in the Argentine, and had written it off as a loss. They discovered that the city was developing in such a way that their property would soon reach its present enormous value. To consolidate themselves in Argentine hearts and seize this opportunity to expand their business in a new sphere, they gave certain real estate which the city wished to buy for parks and boulevards quite gratis. As a result practically the entire Argentine Navy later steamed across the Atlantic, up the broad Gironde to Bordeaux and, anchoring off the Calvet wine wharf, blazed away a salute to M. Jean Calvet. On the day that a member of the House lands at Buenos Aires he receives an invitation to dine with the President of the Republic, no matter which party is in power.

Messieurs Daniel, René, and André Calvet are the sons who remain in Bordeaux. True sons of France, they live with their parents—Daniel his beautiful Basque wife and babies, the bachelors René and André, all *en famille*. Their residence is the enormous, stately, formal Château Tausia, designed, and the spacious park landscaped by an architect who did similar work for Louis XV at Versailles. Here several hundred American troops were accommodated in 1917, and, against the protests of their officers, who

[Continued on page 118]



A "WINE LIBRARY"



CHATEAU D'YQUEM: EMPEROR OF WHITES



CHATEAU MARGAUX: POET OF REDS

The Times and The Times and Their Times

A comparison of the two greatest newspapers of the world's two greatest cities, showing that while the *Times* of London may never net \$7,000,000 in a single year, the *Times* of New York will never be granted a coat of arms.

THERE was a thunderstorm in the valleys west of Verona at four o'clock in the afternoon of the twenty-fourth of June, 1859. The heat of the sun had been very great, and the wounded in the houses of Castiglione lay with their faces toward the darkened doors and the rain. From the church tower where Louis Napoleon had stood all day the rise of ground toward Solferino was hidden. The sound of the guns was dulled by the soft sound of the water. It was said in the town that the Austrians had withdrawn.

In the door of a house, writing on a pad, was an American named Raymond, a small, brisk man with a ruffle of whiskers round his chin. Somewhere, unseen by him but continuously present in his thought, was an Englishman, the correspondent of the *Times* of London, also writing. What the correspondent of the *Times* of London was writing was *The Truth About the Battle*. Until it was published in London and sold in New York and Berlin and Madrid, there would have been no battle. The correspondent of the *Times* was as essential to the authenticity of the occasion as Louis Napoleon or Francis Joseph or Victor Emmanuel or the dead French Guards on the rise of ground beyond the shadow of the rain. And all this Raymond knew. And was about to change. Raymond was himself the correspondent (and the editor) of the *Times*—the *New York Times*—previously the *New York Daily Times*, eight years old that year. And it was his purpose to publish in the *New York Times* an account of that day's engagement which should appear in New York before the *Times* of London appeared there and which should, as accurately and as movingly as the *Times* itself, report the Truth. He succeeded. The military messenger who carried Louis Napoleon's victorious dispatches and the solemn utterance and judgment of the *Times* in one pocket carried Mr. Raymond's impertinence in the other. Mrs. Raymond received it in her Paris hotel and delivered it to the mail boat out of Liverpool with her own hands. It arrived in New York on July twelfth and had been printed, read, and forgotten before the corresponding copy of the *Times* of London had reached New York.

What Mr. Raymond had accomplished was certainly an impertinence. The *Times* of London was not only a great newspaper in 1859; it was *the* great newspaper. It was then seventy-four years old. Its circulation was well above that of all its London competitors combined. It had sent the first of war correspondents, the great Henry Crabb Robinson, to Germany and the Peninsula and had brought his dispatches into England by private cutters, French fisherman, and paid smugglers in spite of Pitt and the devil. It had attacked the Slave Trade, supported the Reform Bill, and exposed, at its own very considerable expense, the most spectacular of schemes of international forgery, winning thereby the everlasting gratitude of the merchants of London and an imposing commemorative tablet. It had published the Crimean dispatches of its correspondent, William Howard Russell, and

those dispatches, with their vivid and convincing description of the hardships of the campaign, the stupidity of authority in the field, and the smug, patriotic impotence of the Government at home, had drawn Florence Nightingale to Scutari and shaken the stones of the War Office. The *Times* of London was already an institution and an independent power in the world. No one knew beforehand what it would say except that "it would be something well-informed and definite." No one knew, or was supposed to know, who wrote for it. Correspondents who had breakfasted together passed each other without recognition in its halls. It was as anonymous as the Church, as grave as Virtue, and as right as Jove. It was called the "Thunderer."

And the *New York Times* was nothing. It was a beginning. Its great journalistic triumph prior to 1859 had been its appropriation of the *Herald's* account of the *Arctic* disaster, and its influence in public affairs had been limited to the repair of the local streets. It had a long way to go before it would have anything but its name in common with the *Times* of London. But once set upon the way by Raymond, it traveled fast. In 1870 the exposure of the Tweed Ring brought it enormous prestige and at last a mounting circulation. It began to make money and to pay dividends up to 90 per cent or 100 per cent on its \$100,000 capitalization. And had it not been for the unfortunate combination of a new building, a shift to a new political party (the *Times* retired from the Republican Party and assumed an independent Democratic position in 1884), and a panic, it might have reached a position comparable to that of the *Times* of London by the end of the century. As it was Mr. Adolph Simon Ochs, owner and editor of the *Chattanooga Times*, bought it for \$75,000 in 1896. At the time of the purchase the *New York Times* had a circulation of 19,000 copies, half of which were usually returned, and a daily deficit of \$1,000. It was under the control of Mr. Ochs that the upper reaches occupied by the *Times* of London were eventually attained. A great newsgathering fabric was built up. Prestige was accumulated. And the *New York Times* became in its turn an institution. But an institution, even yet, with a difference. Less an organ of expression than an organization for the sale of news. In the first twenty-five years following the purchase of the *Times* by Mr. Ochs its circulation rose to 350,000 and its annual receipts to \$15,000,000 (of which only 3 per cent was paid out in dividends). It took on a corporate importance. Its individual writers were absorbed into the general solidarity. But if the weight and anonymity of the *Times* of London seemed to invest it, they invested it for different reasons. The anonymity of the *New York Times* was not a device to hide the personalities and powers of its writers, most of whom were anonymous in their own right and none of whom were men of great personal influence or noticeable literary attainments. And the ponderosity it displayed was not the effect of its political responsibilities, but

the natural and common result of business success and size.

In the meantime, however, the *Times* of London was itself changing. John Thadeus Delane, who had been made editor at the age of twenty-three, had fought the Stamp Act and the tax on paper and with their repeal had brought the price of his journal down from 5d to 4d to 3d, and his circulation (in 1864) up to 66,000. Thomas Chenery, professor of Arabic at Oxford, who succeeded him, had employed the great Henri George Oppen de Blowitz, of Blovice, Bohemia, most melodramatic and mustachioed of special correspondents, whose abstraction of the unsigned text of the Treaty of Berlin from under Bismarck's nose was a European wonder, and whose publication of a communication privately received from the French Minister of Foreign Affairs is said to have prevented a second Franco-Prussian war. George Earle Buckle, Fellow of All Souls College, Oxford, had succeeded Chenery. John Walter III, son of John Walter II, son of John Walter I, coal merchant, underwriter, printer, and founder of the *Times*, had in his turn died to be succeeded as proprietor by Arthur Fraser Walter, his son. And in the year 1908 the whole, ancient fabric had, after the failure of various undignified devices for the inflation of circulation, such as the circulating Book Club, fallen flat. Lord Northcliffe bought the pieces where they lay for £320,000 (\$1,552,000) cash. From that time until the death of Northcliffe in 1922 the *Times* was a kind of monster, an amalgam of unrelated limbs. Part of it jiggled like Northcliffe's two-time *Daily Mail*. Part of it paced like Chenery's Victorian columns. Editors changed. Buckle was invited to devote his attentions exclusively to his *Life of Benjamin Disraeli*. His successor, Geoffrey Dawson, also a Fellow of All Souls, invited Northcliffe to find another editor. H. Wickham Steed followed upon Dawson. In 1922 it was only too evident to all right thinking persons that a similar hurly-burly must never be allowed. The controlling interest was therefore purchased from the Northcliffe estate for £1,350,000 (\$6,547,500) by the Honorable John Jacob Astor and John Walter IV. Shares owned by Sir John Ellerman were bought for another £200,000 (\$970,000). And a committee was established to see to it that the present owners of the shares should never part with them at any sacrifice of "the best traditions and political independence of the *Times*" or of the national interests, and to eliminate from such transfers, "so far as reasonably possible, questions of personal ambition or personal profit." The members of the committee were to be, ex-officio, the Lord Chief Justice of England, the Warden of All Souls College, Oxford, the president of the Royal (Scientific) Society, the president of the Institute of Chartered Accountants, and the governor of the Bank of England. That the present incumbents of these offices accepted the rather curious responsibility of seeing to it that Major Astor and Mr. John Walter or their heirs and assigns should sell their shares only to public spirited gentlemen like themselves, is a most forthright and conclusive witness to the institutional and public character of the *Times*. One would say that nothing remained but to bestow a coat of arms. On December 23, 1929, this was

done, and the *Times* was granted the first coat of arms ever bestowed upon a newspaper.

These committees and the adornment of a coat of arms are not without their pertinence to a comparison of the corporate qualities of the London and the New York *Times*. It is not solely because the United States Government supports no College of Arms that the New York *Times* will never have a coat. The United States is familiar with the uses of committees. But it is inconceivable that the Chief Justice, the governor of the Federal Reserve Bank of New York, the president of the American Academy of Arts and Sciences, the dean of Harvard College, and the president of the U. S. Chamber of Commerce should agree to serve upon a committee to prevent Mr. Adolph S. Ochs, his son-in-law, Mr. Arthur H. Sulzberger, and the members of his family holding stock in the corporation, from selling their shares to persons of less public interest than themselves for motives of private profit.

THE NEW YORK TIMES

Mr. Ochs finds virtue to be its own (but not its only) reward.

The New York *Times* is called the most valuable newspaper property in the world. The Chicago *Tribune* calls itself the "World's Greatest Newspaper." Neither description is just, although, reversed, each would be more nearly appropriate than it is. The Chicago *Tribune* makes more money, at present, than any other newspaper in the world—probably not less than \$7,000,000 per annum. And the New York *Times* is certainly the world's greatest business exclusively devoted to the collection and sale of news. But the measure of a great newspaper is not so simply taken.

The gross income of the New York *Times* in 1929 was probably close to \$40,000,000, including some 32,000,000 lines of advertising at about \$1.00 per line—there being fourteen "agate" lines to the inch. (In this discussion we omit entirely any consideration of the company's revenue from valuable real estate or from such other sources as its large interest in the Spruce Falls Power & Paper Company.) While normally a 10 per cent profit in such a competitive market as New York would be close to the limit, it is probable that in 1929 the New York *Times'* net profit was \$6,000,000, or even \$7,000,000. By general pre-stock market crash standards, the *Times* might have been valued at fifteen time earnings, which would have made it worth the resounding and magnificent sum of one hundred million dollars—\$100,000,000. Even if the Chicago *Tribune* made more than \$7,000,000 (as some local enthusiasts imply) it would not necessarily be deemed worth one hundred million—unless the future of the *Tribune* is greater than the *Times*.

All this, of course, is in sharp contrast to the ideas of only a few years ago. Then, few people would have dreamed of paying more than five times earnings for such a queer business as a newspaper.

Today, with more recent ideas deflated, good estimators do not revert to the five-times formula, but they are still reluctant to value any

"industrial" at more than ten times earnings. The ten-times formula would, therefore, value the New York *Times* at about \$60,000,000. On the one hand Mr. Ochs might—one would suppose he would—refuse that price. But, *per contra*, it would be a bold soul who would pay that price with the implied boast that his genius could more than justify the price over the period of a generation.

The *Times*, in short, is perhaps the classic example of the unpurchasable. Money cannot buy it because, in money, it is worth so much: the great paradox of our age. But aside from the colossal nerve which would be involved in buying (and hence placing a value on the *Times*) there is grave reason to suppose that, like some other industrials (such as Fleischmann's Yeast which already goes to dealers covering 95 per cent of the United States), the *Times* may have nearly exhausted its possibilities for growth. The average number of pages in a daily issue last year was 55.41. Sixty-four pages is now thought to be the limit—of course, sixteen was once considered maximum. Nor is any maximum assured. During the first three months of 1930, the *Times* coined 16.05 per cent or nearly \$2,000,000 less advertising than in the corresponding months of 1929. Being in a position where it *can* lose much more than it is likely to gain, any such sum as \$100,000,000 is fantastic—although, aside from sentiment, Mr. Ochs might still refuse \$50,000,000.

In comparison with such sums the *Times* of London is, of course, nowhere. Its profits for the year ending in June, 1929, were £331,592 (\$1,608,221), for the preceding year £272,274 (\$1,320,529), and for the year before that £225,855 (\$1,095,397). It carried 7,676,000 lines of advertising in 1929—between a quarter and a fifth of that carried by the New York *Times*, and its circulation was 185,000 as against 155,000 in 1918, an increase of 20 per cent (which is almost the percentage of increase in the circulation of the New York *Times* in the same period). Even granted that it has not yet reached the dangerous bulk of the New York *Times* (it averages twenty-four to thirty-two pages,) it is yet doubtful whether its possibilities of future expansion are very much greater than those of the New York paper. For the *Times* of London, even more than the New York *Times*, has a limited public, the public of rentiers and professional men and land owners, which is not increasing in either numbers or power in present-day England. Nevertheless, the dividend and profit record of the *Times* is impressive. In 1922 when the present owners purchased it for £1,550,000 (\$7,517,500), it was paying dividends on its preferred shares only (£320,000 [\$1,552,000], out of the £1,000,000 [\$4,850,000] authorized shares) and its net profits were only £1,339 (\$6,494). Since that time it has paid from 6 per cent to better than 8 per cent on its preferred shares and up to 15 per cent on its common shares. Conceivably, therefore, a purchaser would be willing to pay ten times present earnings for the property, i. e., about £3,500,000 (\$16,975,000). But even so the superiority in value of the New York *Times* is striking enough.

The financial success of the New York *Times* is the great proof of the adage that virtue is its own (but not its only) reward. Mr. Adolph



Ewing Galloway
THE BEGINNING OF NEWS—REPORTERS AND THEIR NOTEBOOKS



P. & A. Photo
COPY DESK, WHERE NEWS IS HEADLINED



Ewing Galloway
IN THE LINOTYPE MACHINES, THE NEWS BECOMES TYPE



Photographs by Margaret Bourke-White
RAW NEWS RECEIVES ITS FIRST REFINING AS IT IS TELEPHONED
BY THE REPORTER TO THE REWRITE MAN



NEWS, AS TYPE, IS MADE UP INTO A PAGE. STRICTLY SPEAKING, NO
NONUNION MAN, NOT MR. OCHS HIMSELF, CAN TOUCH TYPE

Simon Ochs came to New York from Chattanooga with an idea and \$75,000 worth of credit. With the credit he purchased the then almost defunct New York *Times* and with the idea he built a great journal. The idea was, in the phrase of the late Melville Stone, that decency means dollars. "If a sincere desire," said Mr. Ochs in his statement of policy, "to conduct a high-standard newspaper, clean, dignified, and trustworthy, requires honesty, watchfulness, earnestness, industry, and practical knowledge applied with common sense, I entertain the hope that I can succeed in maintaining the high estimate that thoughtful, pure-minded people have ever had of the New York *Times*." This was in 1896. In 1896 Mr. Pulitzer's *World* and Mr. Hearst's *Journal* were "yellows"

with enormous circulations, screaming headlines, and a content which, if it would not make a modern newspaper reader wince, was enough to shock most of the decent citizens of the nineties. Mr. Ochs' manifesto was directed against these journals and his motto "All the News That's Fit to Print" was meant to stand as a daily condemnation of their methods. Also it was applied in practice. Mr. Bryan was never again, after Mr. Ochs' purchase, referred to as the "gifted blatherskite from Nebraska" in the columns of the *Times*.

But it was much more than a victory over yellow journalism that Mr. Ochs was preparing.



Sport & General
MONTAGUE NORMAN, GOVERNOR
OF THE BANK OF ENGLAND



Sport & General
SIR ERNEST RUTHERFORD, PRESIDENT
OF THE ROYAL SOCIETY

The Lord was on his side, and a future that Mr. Ochs never foresaw was waiting to bless his labors. He was right, as the event proved, in supposing that a considerable proportion of the people of New York would prefer a decent statement of fact to a routine of prurient scenarios. What Mr. Ochs did not foresee in gambling on the news as against mere journalistic liveliness was that, with the 20th century, there would "break" a series of great news stories of such importance and interest and excitement that the paper which was prepared to handle them would easily leave its other-minded competitors in the dust. And a second thing which Mr. Ochs could hardly have foreseen was the great 20th century American appetite for Instruction, the appetite which has called forth the Book Clubs and the Chautauquas and the Current Events Clubs and the Little Theaters, and the biographies and the biographical novels and the anthologies and the Outlines of Science and the Outlines of Philosophy and the Outlines of History and the Outlines of Outlines and the whole overwhelming mass of informative information. To such a pub-

lic the serious and decent newspaper is almost sacred. And to such a public the *Times* appeals. When, for example, as during the Naval Conference and the Byrd Expedition, the *Times* forces upon its readers news (and hardly news) of the least possible interest, they are grateful. They realize that it is done for their own good. And they receive it chastened and with thanks.

There is such an element of chance or heavenly intercession in the lives of all successful men. But in the life of Mr. Ochs and his *Times* it lifts so large that Editor-Dr. John H. Finley's jocular intimacy with the Lord and cozy ease in His presence, which are manifest in his composition of a versified "Grace Before Meat" for the *Times* table, seem somehow quite appropriate and just.

"O Lord, the Giver of All Good

In whose just Hands are all our Times,
We thank Thee for our daily Food
Gathered (as News) from many Climes.
Bless All of Us around this Board
And All beneath this ample Roof:—
What we find fit to print, O Lord,
Is, after all, the Pudding's Proof."

Mr. Ochs' conception of decency and editorial honor led him to other disciplines than those of news and to other rewards. He refused to print deceptive or improper or untrue advertising. It was a great and radical step and one that seemed bound to lead to bankruptcy. Even the



Sport & General
F. W. PEMBER, WARDEN OF
ALL SOULS COLLEGE, OXFORD



SIR WILLIAM PLENDER, PRESIDENT OF THE
INSTITUTE OF CHARTERED ACCOUNTANTS



Sport & General
LORD HEWART, LORD CHIEF
JUSTICE OF ENGLAND



N. Y. Times Studio
ADOLPH S. OCHS, PUBLISHER OF THE
NEW YORK TIMES



Underwood & Underwood
ARTHUR HAYS SULZBERGER, SON-IN-LAW AND
POSSIBLE HEIR TO MR. OCHS



N. Y. Times Studio
DR. JOHN H. FINLEY OF THE
TIMES COUNCIL

best English papers, even the *Times* of London, published (and still publish) medical advertisements of doubtful merit. And the London practice of accepting pay for advertising that appears as reading matter has not yet gone out. But Mr. Ochs felt himself under obligation in his advertising as in his news columns not to deceive his readers, and he acted accordingly. Nothing is more to his credit than his refusal, on occasions when he could hardly have afforded to refuse, of advertising patronage of which he disapproved. And if he has profited by his courage, if the effect has been to make an advertisement in the *Times* to some degree a guaranty of honesty and therefore more valuable to the advertiser, he deserves the reward. The *Times* itself, in its *History*, is as frank as the most carping of its critics could be: "In this matter, too . . . the conductors of the paper have always

felt that good business and good morals were identical. If it is morally dishonest to permit advertisers to dictate the policies of the paper, it is likewise commercially ruinous in the long run . . ."

The *Times*, which is to say Mr. Ochs, is therefore chiefly responsible for one of the greatest and most honorable changes in modern journalism. The advertiser who still believes that he can, or should be allowed to, dictate in any measure the policy of a paper is as ignorant and short-sighted as he is coarse. Only by maintaining its independence and its virtue can a paper make effective the notices it publishes. In 1901, when the circulation of the *Times* was only 100,000 and its advertising less than 5,000,000 lines, Mr. Ochs wrote to a meddlesome advertiser a letter which deserves to be set forth in full:

"You must excuse me from discussing with you the policy of the New York *Times*. It is a subject we do not care to discuss with an advertiser. We consider it a privilege to anyone to be permitted to make an announcement in the columns of the *Times*, aside from the fact that our rates for advertising space are far from commensurate with the service rendered. If the New York *Times* as it appears every day is not a sufficient recommendation for the use of its columns by advertisers (such as we will accept), assurance otherwise would be of little or no value.

"We do not want to sail under false colors. The New York *Times* is not published solely for the purpose of attracting advertisers. We hope, however, to attract by the number and the class of our readers. We are seeking to secure the good-will and confidence of intelligent, discriminating newspaper readers. The advertiser is a secondary consideration. We take great pride in the knowledge of the fact that we have succeeded in impressing the honesty of our efforts upon the largest number of the best citizens of this city, representing both readers and advertisers. Of course, there are some exceptions. Among the latter class a conspicuous example is yourself. You seem to wish that the New York *Times* should go about as a

mendicant, begging for advertising patronage. We will never do anything of the kind and are happy to say there is no occasion for our doing so.

"This all leads to the statement that if your advertisement remains out of the New York *Times* until you have some assurance other than the paper as it appears every day, as to the policy of the publisher, the *Times*, as long as it is under its present management, will endeavor to get along without your business."

With increasing size and wealth the freedom of a newspaper obviously becomes greater. The *Times* in 1929 rejected over \$350,000 worth of advertising it considered improper, and over 500 financial firms. Its means are such today that no corporation or business could hope to influence it. And it should be, with its position and its ideals of news, as unbiased a publication



ROLLO OGDEN
EDITOR-IN-CHIEF



Wide World
LOUIS WILEY
BUSINESS MANAGER



Photographs by Margaret Bourke-White
TURNING THE NEGATIVE FOR THE HALF-TONE CUT



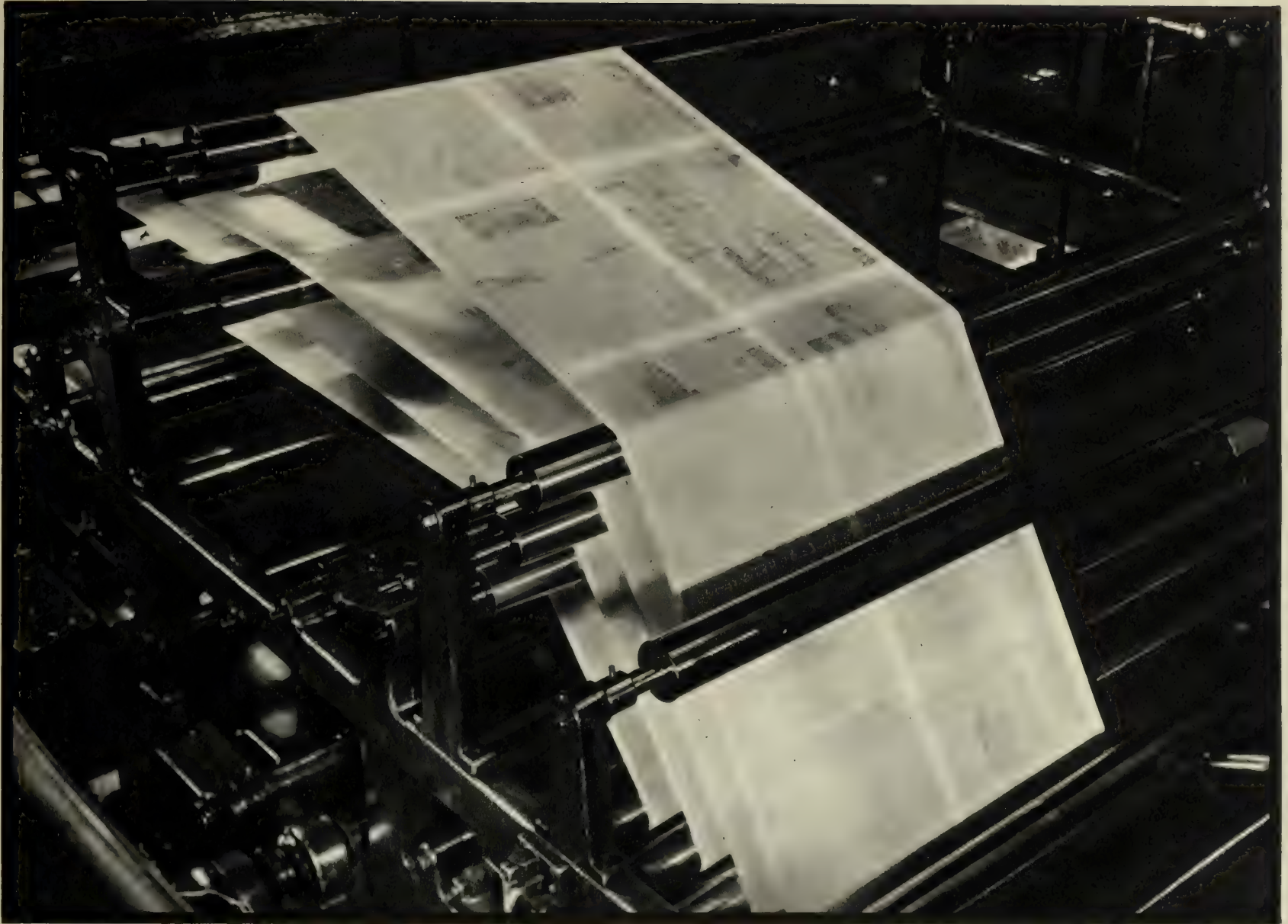
A VETERAN LINOTYPIST CAN SET 1,500 WORDS AN HOUR



THE ART DEPARTMENT SCALES COPY TO FIT IN TWO COLUMNS



ROUTING TO LEAVE ONLY THE SURFACE WHICH SHOULD PRINT



Photographs by Margaret Bourke-White

THE NEWS, TYPE SET IN A PAGE AND PLATED, IS MADE INTO A NEWSPAPER ON GIANT WOOD PRESSES



THE PROOF READER HUNTS A MISTAKE



NEWS GOES TO THE COUNTRY



PEDIMENT OF THE LONDON TIMES BUILDING IN PRINTING HOUSE SQUARE

as any reader could desire. But the means of independence are themselves a restraint. As the *Times* has grown rich it has taken on (it always had the inclination) a rich man's mentality. Its more radical (and perhaps most prejudiced) critics believe this mentality to have affected even the high neutrality of its front page. During the Communist Revolution in Russia, for example, the *Times* reported, according to Mr. Oswald Garrison Villard, "that Petrograd had fallen six times, been on the verge of capture three times more, been burned to the ground twice, been in absolute panic twice, and in revolt against the Bolsheviks on six different occasions—all without the slightest foundation in fact." To which Mr. Villard adds, "Only in the columns of Hearst could one find a record to equal this." At present Mr. Walter Duranty, the best of its correspondents and much the best of its writers, sends considerably more accurate news from Russia. But the social complexion of the *Times* has scarcely changed: it still gives undue space to the nightmares of the witch-burners and the discovery of propaganda plots, and it still shies like an oat-fed horse at a red banner.

Also it has taken to the excathedral manner so frequently observed among persons of power and great influence. And not in the editorials alone. Mr. Edwin L. James, head of the *Times* European bureau and long its Paris correspondent, a man whose amazing power of penetrating the intentions of the French Foreign Office was only equaled by his capacity for assimilating its publicity, reported the London Naval Conference with such Bismarckian asides as, "How much simpler, how much easier, and how much more effective was it to let the others blow off steam and rest with dignity on our claim for parity with the greatest other navy." And "As we did today we shall listen sympathetically and in readiness to give our advice. And when they are ready to reduce we will talk business." As the excellent and subtle newspaper critic of the *New Yorker* neatly observes, "There really was no need to have sent anybody but Mr. James to London."

It is the richness, material and verbal, of the *Times*, and the saying that the *Times* is merely the manifolded shadow of Mr. Adolph Simon

Ochs, that leads people like Upton Sinclair to depict Mr. Ochs as the archreactionary. In practice he is no such thing. He has taken more business chances than most men; and two of them, his gamble on the appeal of sober news, and his gamble on the value of clean advertising, were radical enough in their day. The truth of the matter would seem to be that Mr. Ochs is a constructive and practical man whose purpose was to build up a great business (devoted to the sale of news); who succeeded magnificently; who has, as a result, a very great stake in the existing order. And also that the business is now more important than its creator, and weightily unresponsive to his personal views. Mr. Ochs set out to create an institution, and he created one. It is hard to believe that the shadow does not now fall in the other sense—from the Times Building across the shoulders of Adolph Simon Ochs.

It certainly falls across the shoulders of his subordinates. Only one or two of them are visible beneath. Mr. Rollo Ogden, editor-in-chief, is a mild and kindly gentleman who refuses to betray his presence by so much as a gesture of his own. He is a graduate of Union Theological Seminary, a former Presbyterian minister and missionary (to the Mexicans), and the ex-editor of the *New York Evening Post*. He claims to feel radically on only two subjects, reformed spelling and experiment with the rules of golf, to both of which he is opposed. The *Times* editorial page is said to be less camphorated under Mr. Ogden than in the days of Charles R. Miller, but the difference, if it exists, is faint. Mr. Carr V. Van Anda, the managing editor, has a great reputation among newspapermen and is credited with the organization of the newsgathering service for which the paper is chiefly famous. Mr. Arthur H. Sulzberger, husband of Mr. Ochs' only daughter and his probable successor, is a young man of parts and presence, who does not, as yet, permit himself to talk about the *Times*. Mr. Julius Ochs Adler, nephew of the owner and vice president and treasurer of the corporation, is a military man with an honorable record and patriotic views. The *Times* is greater than them all. But not than Mr. Louis Wiley.

Mr. Louis Wiley has been the business man-

ager of the paper for thirty-four years. If any man in America has a monument he has one. And he is sixty, an age when monuments are frequently in mind. But Mr. Wiley is too busy about a great number of very exciting and entertaining and absorbing things even to think of the subject. He is probably more engaged in living than any man of his years in New York or out of it, and he hasn't come to the end yet. Dancing is his great love, but when there is no dancing to be done he will dine out or sit in a theatre or even attend a reception. He goes out every night in the month but one, and that one he has the world in to dinner. He is very small, a Jew, and strong and energetic as many small Jews are. He talks well. He knows everyone. A hall in his Park Avenue bachelor apartment is lined with signed photographs of the great and framed awards of his own degrees and orders, and the names of persons of importance are always in his mouth. And yet he never gives the impression of toadyism and valetism that such practices usually carry. He is simply interested in great men and great names. He prefers people to objects and famous people to others. "What I really like best," he observes with a well-practiced look, "are attractive young women."

He came to the *Times* from Rochester. His father was a clothing merchant in Hornell, New York, and Mount Sterling, Kentucky, in which latter town Louis Wiley began newspaper work. "Mount Sterling," says Mr. Wiley, "had and still has a population of two thousand. I prefer

[Continued on page 126]



Wide World
TIMES ANNEX, MANHATTAN

Paper & Power

Holding an empire which begins six inches above the ground and ends in the tree tops, I. P. & P. makes paper with one hand, power with the other. Guiding both enterprises is the able Mr. Archibald Robertson Graustein.

THIS is Eagle Depot: a cluster of twenty-four log-walled buildings capping a loaf-shaped hill. It is a long way from New York. Take the sleeper for Ottawa. Look at Parliament Hill and the Victory Tower. Then look north, up the Gatineau. Through thick forests and deep snow. Along the Brule where mighty trees burned and where the wind now whips cruelly through the bush. To Eagle Depot, the huts, and the hill.

Behind Eagle Depot is a ridge and on the crest of the ridge is a tower and from the top of that tower the eye can span 700 square miles of wood and ice. Scattered through the forest are seventy-eight camps. Each morning at dawn they disgorge men who people and space the wilderness. Quite literally, they people it, for no man lives in Eagle District for pleasure. Quite literally, too, they space it, for with them they carry danger. In the form of axes and saws. In the form of falling trees. In three and a half months these men (some 300 in the Eagle District) will fell 800,000 trees, which is just over 2,650 trees per man. Eight or nine minutes is sufficient time in which to fell a ninety-foot spruce, nine minutes from the first chip of the notch to the thundering crash of the tree's impact on the ground. While it is still settling into the snow, the team (two men constitute a team and always work together) begins to cut away its branches and saw it into sixteen-foot logs. Each log is branded, like a steer.

On sleds the logs are hauled to the river. Here they wait, mountain-high, snow-capped, until the ice melts beneath them and they start their long, tortuous drive to the Ottawa. In sixty days of hauling, last year, 2,400,000 logs were piled thus upon the waters of the Eagle alone. So tremendous the harvest of the men with saws. So potent the hill and the huts.

But other piles dot the rivers to the east and to the west. And to the north, as

far from Eagle Depot as Grand Rapids is far from Chicago. Throughout the vast Gatineau valley are 331 camps from which, at a 30-degree-below-zero dawn, the teams emerge. Upon the frozen rivers rise 331 such mountains, crumbling as the ice goes, forming 331 avalanches of spruce and pine and balsam, splashing into the swift streams of the valley.

Five out of six of these logs, these great beheaded trees, go to one mill, to be distilled into paper for one company. Last year, 8,000,000 logs were driven by 3,700 men to the Gatineau mill of the International Paper Co. Their immediate destinations were the digesters and giant rollers of the world's second largest newsprint mill. Their ultimate destinations were the morning papers of 10,000,000 North American literates.

International Paper Company

This is the empire of the International Paper Co., one of the largest single industrial holdings in the world. Beside its 35,400 square miles, the plantations of Ford in South America, Firestone in Liberia, United Fruit Co. in the Caribbean seem insignificant. It is larger than eleven of the United States and larger than sixteen of the independent nations of the world.

One curious fact limits it. International Paper *owns* comparatively little of this land. This forest empire, colossal though it be, is yet a *forest* empire and not a domain. It begins exactly six inches above the surface of the Canadian earth and ends where the highest branch shivers in the Canadian wind. Between these two lines, International may chop and saw as it will (observing certain limits of size), but when a giant spruce crashes, it falls on land which *belongs* to the provinces of Canada. The province holds this land, may some day divide it into homesteading tracts for future generations



Photographs by Margaret Bourke-White

AT DAWN EACH DAY WITH AX AND SAW . . .



A SLICE OF I. P. & P.'s 700-SQUARE-MILE SPRUCE PIE IN THE
VALLEY OF THE EAGLE RIVER



THEIR RIVER JOURNEY BEHIND THEM, THESE LOGS AWAIT THEIR APOTHEOSIS AT THE PAPER MILL



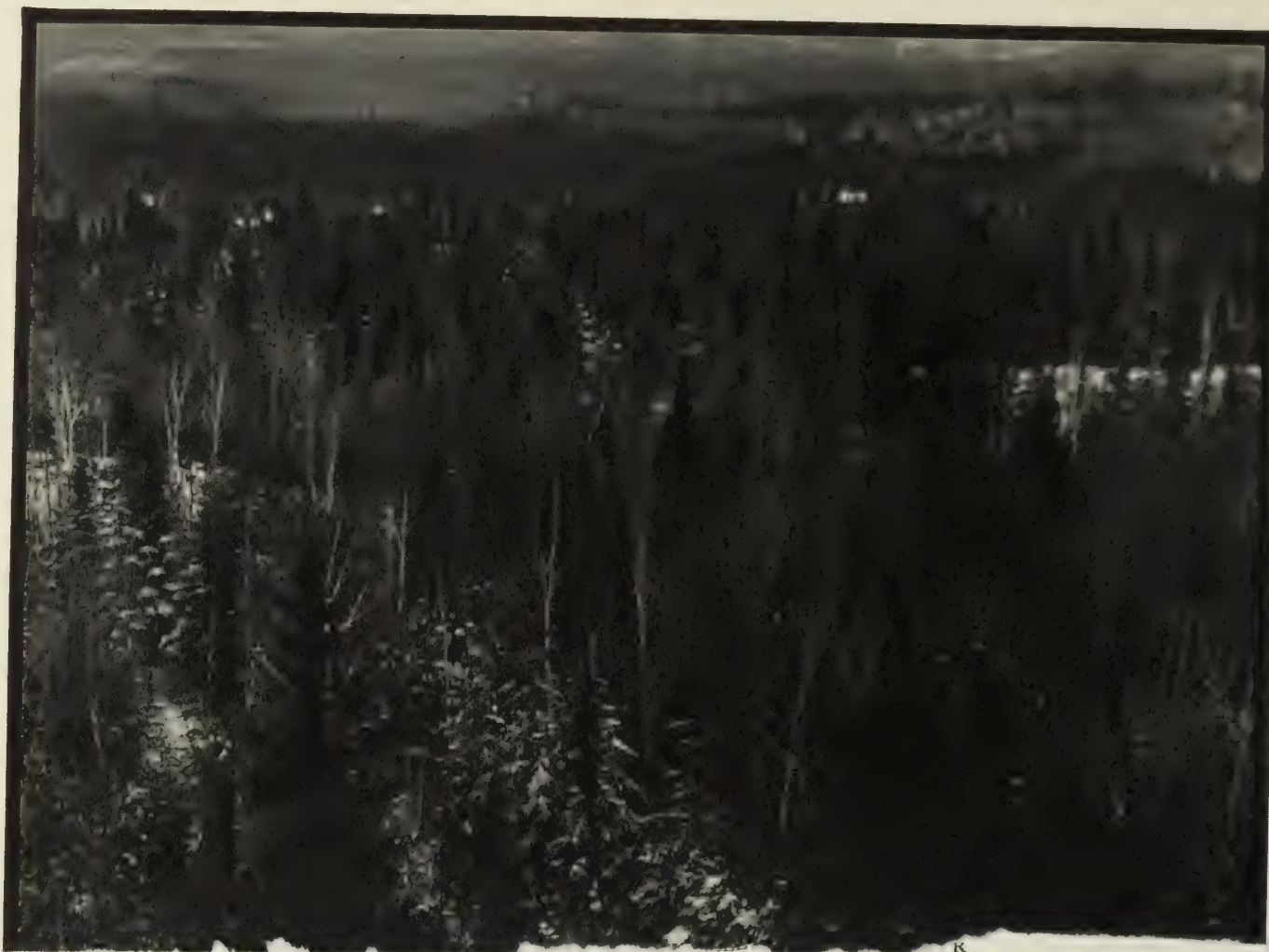
IN NINE MINUTES, THIS TREE WILL CRASH TO THE GROUND TO BECOME PULP FOR I.P.&P.

There has also been built on the St. John River, in New Brunswick, a 60,000 horsepower plant and at Deer Lake, in Newfoundland, I. P. & P. bought a plant of 98,000 horsepower. As a side line, it makes all the envelopes used by the United States Government. In Wellsburg, West Virginia, it makes paper from rope, and at Herkimer, New York, from scrap leather. Its pine (no good for pulp) it cuts and sells to contractors in Montreal, Ottawa, and Quebec. It has, naturally, such appurtenances as a coal mine, a fleet of tugs, and 25,000 tons of ocean-going steamships.

International Paper & Power Co.

Thus the International Paper Co., an enterprise sufficiently vast to occupy the full attention of most men. But for the last few years President Archibald Robertson Graustein has fought the battles of paper and pulp with one hand, while with the other he has built up a second enterprise equally gigantic, and at first glance unrelated. International Paper is now the world's chief producer of newsprint; its new (1928) parent, International Paper & Power Co. is one of the world's largest producers of power.

On March 27, 1929, Mr. Graustein announced that I.P.&P. had bought 82 per cent of the common stock of the New England Power Association, the principal power system in the New England states, now distributing electric current to a population of 2,500,000 people in 250 communities. It owns or controls plants in New England (exclusive of Maine) to the extent of 429,500 hydroelectric and 477,500 steam-electric horsepower. Under construction at Lower Fifteen Mile Falls on the Connecticut River is a 200,000 horsepower plant upon which work is being rushed night and day. Powerful floodlights consuming New England Power Association current from other plants play upon the works at night.



The New England Power Association is a money-making association of money-making subsidiaries. It is to be considered at its present state as an investment and a good investment. Its productivity has been increased by extensive interstation hook-ups, and is being further increased by such work as that at Fifteen Mile Falls. This is all good business, and interesting to the man who welds paper chains with one hand and power chains with the other.

But his greatest interest has unquestionably been in the power development he had sired north of the American boundary line. In a review of I.P.&P., there is time and space only to tabulate the outstanding features of the colossal work which has been accomplished by the Canadian Hydro-Electric Corp., Ltd.

It has impounded more water (145 billion cubic feet) in its Cabonga-Mercier reservoirs than is impounded by artificial reservoirs anywhere else in the world except at Gouin on the St. Maurice and at Gatun in Panama. It has built at Pagan, on the Gatineau, a 204,000 horsepower plant which sends out over high tension lines some 150,000

horsepower to Toronto, 230 miles away. This plant is interconnected with other units which have been built farther down the river. And from them it will draw power when the load is increased to 260,000 horsepower, as it is to be by October first of next year. The units farther down are Chelsea and Farmers, a mile apart but operated practically as one. Chelsea produces 136,000 horsepower and Farmers 96,000. These giants and the pygmy Corbeau Rapids (3,000 horsepower) plant already have transformed the Gatineau River into a pulsing artery of electric power. When near Maniwaki another 100,000 horsepower plant is built (as some day it will be) and when additional units for which space has been provided in the present plants are installed, the present Gatineau total of 439,000 will be boosted to 665,000 horsepower.

From the Ottawa at Chaudiere Falls and Bryson, 86,600 horsepower are developed; from Gordon Creek at Temiskaming, 24,000; and from other tributaries of the Ottawa, 16,000—a total of 562,600 horsepower produced in the province of Quebec, 480,000 of which have come into operation since 1925.



A SIDE STREET IN A JOBBER'S CAMP



THEIR RIVER JOURNEY BEHIND THEM, THESE LOGS AWAIT THEIR APOTHEOSIS AT THE PAPER MILL



HERE BEGINS THE PULP LOG'S EXCITING RIDE TO THE CHIPPER

There has also been built on the St. John River, in New Brunswick, a 60,000 horsepower plant and at Deer Lake, in Newfoundland, I. P. & P. bought a plant of 98,000 horsepower. There remain in Canada twenty undeveloped sites which belong to International with capacities as yet unestimated.

The cost of this development has been tremendous, and the returns are only just beginning to come in. I. P. & P. itself values its plants at \$588,003,015.58, but in 1929, the company's revenue available for dividends totaled only \$4,011,762.03, short of the dividend requirements by over \$4,000,000. Before its reorganization in 1928, International Paper had paid no dividends on its common for twenty-six consecutive years. The reason lay in the curious history of newsprint, and from that history, too, came the able Mr. Graustein's decision to take one hand away from paper and apply it to power.

In 1900 it was possible to print all the newspapers of the country on about 750,000 tons of paper. By 1910 this had increased to nearly 1,250,000, by 1920 to just over 2,000,000, by 1928 to more than 3,500,000. By 1920, consumption had so taxed the capacity of producing units in the United States that some lots of newsprint were sold in the open market in June at \$270 per ton (though the bulk of it was supplied on contracts at \$100). The recession from the peak was slow. Throughout 1920, reports of the Federal Trade Commission show that an average price of \$102.76 was maintained.

Mills enlarged as rapidly as they could to take care of as much business as possible at these phenomenal rates. Capital was attracted to the industry in a veritable flow of gold. Many new manufacturers looked to the spruce forests of Canada, whence they had long been drawing quantities of their pulp, as potential locations for new mills. The provincial governments, particularly those of Ontario and Quebec, welcomed the pioneers and encouraged the advent of others. So quickly did newsprint manufacturers begin

THE JOURNAL
PUBLIC
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their trek into the Canadian bush that a year later (1921) American production had declined 15 per cent, high price and all, and Canadian output had increased 9 per cent. From 1919 to 1928, United States production showed an increase from 1,375,000 tons to 1,415,000 tons. In the same decade Canadian production increased from 808,000 tons to 2,380,000 tons, by far the greatest newsprint production of any country in the world, and 59 per cent of the entire newsprint production of North America.

Canada achieved dominance, the publishers had access to a more than adequate supply of paper, and, as every economist from Malthus down might have foretold, the price came tumbling down. A few abortive efforts were made at artificial control, but newsprint is sold at the mill

today for \$55.20 a ton, one-half of its 1920 price. Papermen are unanimous in asserting that newsprint cannot be made and sold at a profit at such a price. Canadian manufacturers, exclusive of International, announced, late in 1929, that the price would go up to \$60. Old customers who renewed their contracts by January 1, 1930, were to be accorded a rebate of \$5.00 a ton on the \$60 price for the first six months.

International rigidly refused to join in this price elevation. And for a very good reason. It supplies Hearst papers with newsprint under contracts which without doubt did not permit an upward adjustment of price. And, as it has always been a fundamental principle of the newsprint industry that there shall be no price discrimination between customers, there is very

little for International to do. The Canadian government made a threatening gesture in the direction of International by outlawing all cutting of timber by companies who did not agree to advance the rate to \$60. But International still held out. Though many a competitor might like to see International out of the industry, the Dominion has equally cogent reasons for not wanting to see International out of Canada. The advance in price did not go through.

And there are at least two other good reasons for International's refusal to join in the price stampede: first, the International Hydro-Electric System, the power division of Paper & Power. With the widening market for power (central station energy generation has increased in the United States from 2½ billion kilowatt hours in



A Note on Newsprint Making

WHIRLING steel knives have reduced the logs to chips. Up this incline they will go and from the top slide downward into giant digesters, where steam and sulphurous acid will make of them a grey porridge, which is unbleached wood fiber—cellulose. The porridge is shaken in “riffles,” dancing screens which allow any surviving hard particles to drop out. Water pours on this mass constantly, cleaning, diluting the porridge. In bleachers, caustic solutions whiten the pulp, neutralize its digester-born acidity. More water washes, washes, re-

washes the pulp, dilutes it to one part in a hundred. Thus it arrives at the headbox, is spilled out upon the flying wire screen of the paper machine. This, quite logically, is called the “wet end.” Before the torrent becomes a web, it has to be shaken down between eccentric bearings and dried by suction boxes beneath the wire screen. Flying rollers heated by live steam pick the web off the end of the screen, dry it, press it, speed it on to the calendar rolls at the extremity of the “dry end” where the liquid has become paper. These last metal rollers give the paper enough “finish”

or gloss to make the reproduction of photographs possible in your daily paper. Beyond the calendar rolls, huge spindles, flying fast, pick up the web, wind it (a twenty foot ribbon) into rolls at the rate of 1,200 feet a minute.

Side by side in the Gatineau Paper Mills four such machines run at this speed night and day, make 600 tons of newsprint in 24 hours, 186,000 tons in a year's 310 working days. Each of these giants is a city block long, cost about \$350,000, and required months to install.



HERE THE PULP SOLUTION SETTLES UPON THE FLYING WIRE SCREEN

1902 to 97 billion in 1929, is increasing steadily at more than 10 billion per year) and with its Canadian units just beginning to come into production to add their earnings to those of the profitable New England Power Association, it should not be long until the dividends will not have to be paid out of surpluses. (Wall Street expects this year's dividends on the preferred to be earned.) International Hydro-Electric sells to International Paper some 280,000 horsepower. It was the Gatineau paper mill which prompted the construction of the Chelsea and Farmers power units, because it could profitably consume the bulk of their current. This year, the Saint John River Power Company is selling 40,000 horsepower to International's Dalhousie mill. (Dalhousie, long contemplated but delayed in construction, owing to the unsatisfactory price situation in the newsprint trade, was rushed to completion last year to provide a market for this large block of the 80,000 horsepower which will eventually be generated at Grand Falls.)

Herein is seen the *raison d'être* for the marriage of Paper and Power, and for the ambidextrous activities of Mr. Graustein. Paper needs power. Power is most economically generated in huge quantities. Other industries need power. Let paper, therefore, make power, to use and to sell.



THESE GIANT ROLLS, AT TERRIFIC HEAT, DRY AND PRESS THE WEB

The last and perhaps the biggest reason why International did not join the stampede is Archibald Robertson Graustein.

I. P. & P.'s Graustein

Just about a year ago the New York *World* asked the question, "Who is Graustein?" He had been identified by the omniscient New York *Times* as a successful corporation lawyer from New England who had "played an important part in the reorganization of paper companies in Canada in recent years," and as a director of Missouri Pacific, Corn Exchange, New England Power, American Surety, and Manville Jenckes. The *Times* knew that he was graduated from Harvard in 1904, but did not say that it required only two years for him to do so with a *magna cum laude*; knew that he was graduated from Harvard Law School in 1907 and became a member of the law firm of Ropes, Gray, Boyden & Perkins in Boston; knew that he moved into the presidency of International Paper in 1924; knew that on March 13, 1929, he had been married in Texas by a county judge to Miss Claire Patton. "Both," said the *Times*, speaking of the bride and groom, "gave their residence as New York."

The story of Graustein's romance was soon told: how the stocky paper and power king had

found love and Miss Patton both at Roseland, one of Manhattan's most democratic of dance halls, how in shortest possible space of time they had journeyed to the place from which the news was least likely to emanate and there were married. And then he was allowed to return to comparative obscurity until May.

In that month, it was suddenly discovered that I.P.&P. had been quietly dickering with the press. Something more than \$10,000,000 had been lent to publishers, notably to Mr. Frank E. Gannett, owner of a dozen papers (including the *Brooklyn Daily Eagle*) in New York and Connecticut. A half interest had been bought in two Boston papers, the *Herald* and the *Traveler*, and there were efforts to purchase other papers, such as the *Cleveland Plain Dealer*. When the news broke, it was immediately apparent that while the public will let a newspaper own a paper mill (the *New York Times* and the *Chicago Tribune* both have such interests), it is not possible for a paper mill to buy a newspaper. The most violent epithets hurled at I.P.&P. issued from its largest customer, Mr. Hearst, and concerned "chains of infamy," an "octopus," "poisoning the wells of information," and "a \$25,000,000 conspiracy."

Before the Federal Trade Commission, which

questioned him, Mr. Graustein was a candid witness. He explained that International had only two interests in purchasing newspapers. The first was to insure an outlet for paper. The second to make money on the investment. Both of these were important to him and to his corporation. But more important, said he, was the confidence of the Federal Trade Commission that International was no octopus. Wherefore, in less time than it usually requires to complete far smaller transactions, all the newspaper holdings of International were sold. Graustein washed his hands, kept his newsprint contracts, and returned amid considerable applause to devise another solution for his problems.

Few men work longer hours or at higher speed. In the past six years he has spent more time at his desk, day and night, than he has anywhere else. Often he works twenty-four hours without sleeping. Two or three stenographers accompany him when he travels. He usually has a night relay of stenographers who, after dinner, take enough dictation to keep them busy until three or four in the morning. And he is often there to sign the letters when they have finished.

It is probable that his exciting bout with the Trade Commission has already been nearly for-

gotten by him; that it has faded into the insignificance of his fight with Floyd Carlisle for the control of N.E.P.A. Of the N.E.P.A. battle, Mr. Graustein said merely, "There was quite a jangle . . . and a struggle for control developed. They might say something else, but I would say it was precipitated by them. The struggle for control of the New England Power ended in our favor."

At forty-four Graustein feels that he has just started. He has shown himself the smartest man in the paper business and fully capable of running his own show. That show, it now seems, has a fair chance of becoming very profitable indeed. With International Paper put definitely in the dominant position in the newsprint world, New England Power under his control, and the turbulent waters of the Gattineau working for him day and night, he has tackled the economic development of Newfoundland. He has no delusion of grandeur. He does not pose as the white hope of England's oldest colony. Newfoundland prosperity will be just a fortunate concomitant of International's individual development there. Few men have the vigor to play with paper, with power, and take on the development of an island for good measure.



UPON THESE ROLLS AT LAST, A 20 FOOT RIBBON, 1,200 FEET PER MINUTE

Private Cows

The Dutch and French painted "canners"; Mr. Frelinghuysen has true Jerseys in his bedroom.

IN rich men's pastures all over America, fawn Jerseys, golden Guernseys, or black and white Holsteins munch the sweet green grass. From the sadly inquisitive heifer with its nose over the fence to the last cow knee-deep in the bushes beside the brook, every beast in the meadow is a thoroughbred. Their lineage is as pure as their milk, but, unlike their masters, they trace no line to times of Colony and Revolution. It would be a blot upon their breed if their blood went back to the small and ill-formed

stock which came down from Colonial times in America. Such ancient American cattle would be fit neither for milk nor for steak. Today these first cows would be classed not as thoroughbreds but as "canners," creatures fit only to go inside of tins as canned cornbeef.

American aristocrats in the pasture did not come to America until the 19th century, when wealthy grangers began bringing beautiful creatures from abroad. From the oblong island of Jersey came Jerseys in 1850. Guernseys came

from the triangular island in the same English-owned, Norman-French-speaking group of Channel Islands a little later. The Holsteins did not come from Holstein. Winthrop W. Chenery, a gentleman farmer of Massachusetts, brought them over in the fifties from the Dutch province of Friesland on the Zuider Zee, where they were properly called Friesian. Brown Swiss cattle began to graze in American pastures. From Ayrshire in Scotland, where Burns had sung of the rivers Afton and Lugar, came the Ayrshires.



MAHONRI YOUNG PAINTS A COW, WITH CHARM BUT WITHOUT PEDIGREE

All over the nation, but chiefly in the opulent East, herds of these princely kine inhabit great estates. In addition to the rich milk they give, there are reasons for their presence. Long before the dollar, the cow was the symbol of property. Along with the dollar, she still is. The urban and industrial personage, not yet sure of the social structure he has created for himself, takes his symbols from the certain past. The aristocrat owned lands; he owned cattle. The rich man buys land; he buys cattle.

But behind the bucolic picture, the estate of the industrial lord today differs from the estate of the landed lord of yesterday in vital particulars. The landed lord grew rich on his acres and bought a town house for his pleasure. The industrial lord grows rich in the town and buys a country place for his pleasure. The landed lord was rich because he had lands and cattle. The industrial lord has lands and cattle because he is rich. The difference is complete. Mr. Charles M. Schwab, who owns both steel and cows, understands the difference. At a luncheon some years ago on his country estate, he offered his guests their choice of champagne or milk.

"Gentlemen," he said, "they both cost the same."

Mr. Schwab's experience is not unique. Even the simplest of blooded cows costs \$300, blooded bulls much more, and rich breeders of thoroughbred cattle are seldom interested in the simplest of bulls and matrons. William H. Williams, railroads and Guernseys, gave \$25,000 for *Shuttlewick Levy*, who was twice grand champion cow at the National Dairy Show. Three people, Eleanor Fitzgibbon, of Mt. Kisco, New York, John Ellsworth, of Simsbury, Connecticut, and Hugh Bonnell, of Youngstown, Ohio, paid L. V. Walkley, of Plainville, Connecticut, \$65,000 for



Strohmeier

THE BIG STONE BARN ON E. J. CORNISH'S STONY FARM

three-fourths interest in his Jersey bull, *Sybil's Gamboge*. Back in 1913, Senator A. C. Hardy, of Canada, sold a Holstein bull calf out of his world champion cow, *May Echo Sylvia*, for \$106,000.

The cow and the bull are, both biologically and financially, only the beginning. Magnificent cattle require establishments approximating the magnificent. Many wealthy herd owners insist upon simplicity in their barns, but even such simplicity is expensive. The first item is land. The second is barns. A barn must have stanchions, individual box stalls, mangers, feed trucks, feed carriers, silos, milking machines, manure carriers, modern ventilating systems. Some even have tiled walls and vitra glass windows. Beyond the barn is the dairy. A dairy must have cooler, ice plant, sterilizer, bottle machines, churning machines, butter worker, washing vats, separators. A moderate estimate of the cost of equipment in dairy and barn hovers around \$600 a head. And after equipment, there is pay roll for men: milkers and veterinarians. Eternally the expenses climb upward, and many

extremely wealthy men, accustomed to keeping costs within certain limits in their businesses, oscillate between fury and despair over mounting costs upon the farm. Their laments have even brought into being a concern which does nothing but manage the estates of the wealthy. For a consideration, Burlingame, King and Dunk, dirt farmers with offices in New York, are ready to be practical farmers for gentlemen farmers. Some try them; some try other ways.

The luxurious agricultural scene is full of growls and grumbles over expense, but it remains, too, full of cows. They remain for varying reasons. The common denominator is that their masters are rich. James Cash Penney, Edward Joel Cornish, R. V. Rasmussen, and Peter H. B. Frelinghuysen are among those who take their cattle breeding seriously. Other herd owners are interested only in milk and cream and butter for the table. Some keep herds only because it is the social and decorative thing to do. The interest of few goes so far as the Frelinghuysens, who have

had their bedroom painted with murals of their favorite cows and bulls. On their walls, the livestock painter, Edwin Megargee, has depicted not only pretty cows but true Jersey cows.

Other rich cattle owners, interested in cow as beauty and cow as symbol, have carried their love of kine into their taste for art with less success. One American, interested in cows and also in art, thought to find great paintings of Jerseys, Holsteins, Ayrshires, and Guernseys in the galleries of Paris. At first she became fearful that the Dutch and French painters had ignored the breeds common in America for such races as Fribourgeoise, Simminthal, Charolais, Schwitz, Bazadaise, and Cheurf. Puzzled and uncertain, she found a man in Paris who had worked for Swift & Company. He knew little about paintings but a great deal about cows. She took him to the Louvre. He gazed at the masterpieces very carefully, very thoughtfully. Then his lip curved in contempt.

"Canners," he announced. "Every one of them."

I.—Jerseys

THE Jersey, pretty creature, is by all odds the dominant choice of gentlemen farmers. Her milk is rich; her appearance magnificent. As pure decoration, the deerlike Jersey fulfills all desires. In numbers the Jersey, with about 375,000 of its breed in America, lags far behind the Holstein, but while that efficient Dutch creature produces milk for the masses, the Jersey creates cream for the rich.

Perfect example of the country gentleman in modern America is Peter H. B. Frelinghuysen, of Morristown, New Jersey. Born rich, he lives on his Twin Oaks Farm and devotes his life to breeding Jersey cattle. At the National Dairy Show in 1929 his entries carried off more



Strohmeier

JERSEY



HOLSTEIN



AYRSHIRE



GUERNSEY

prizes than those of any other single exhibitor. Mrs. Frelinghuysen, born Havemeyer, is the perfect lady of the squire. Together, pastoral couple, they have attended almost every major cattle show held east of the Mississippi during the past ten years. Known as judges of dairy cattle, their conversation is studded with talk of pedigrees, breeding, feed rations, and production records.

The distinction of Edward Joel Cornish, president of the National Lead Company, is that he owns the rockiest farm in America. At his Cold Spring-on-Hudson, cradled between two mountains flanking the eastern bank of the river, in meadows several hundred feet above the river, Mr. Cornish has bred and developed a herd of Jerseys which ranks near the top for high average production. *Fon Owlet* and *Fon Sayda*, two cows in the herd, have completed world records for production in the different age classes.

From early spring until late in the fall, Mr. Cornish lives at the farm and divides his time between lead on lower Broadway and his herds on the rocky farm. He has a flair for doing things himself, and, in conspiracy with the mountainous country, he has worked out a plan for exercising the bulls. Paddocks, or runways, were built for them at the back of the barn and, as the barn is built at the foot of a steep hill, the runways are on the sides of the hill. The bull must start mountaineering as soon as he decides to go anywhere in the paddock.

Several years ago, W. R. Kenan Jr., president of the Florida East Coast Railroad, attended a sale of Jerseys intent on buying a family cow. The procession in the sales ring fascinated him, and he purchased six cows before the dust settled. A thoughtful professor from the State Agricultural College suggested that a bull was essential to complete a new herd, and so a suitable sire was selected. In such a manner Mr. Kenan found himself suddenly in possession of a herd of cattle. Today the herd at his Randleigh Farm, near Lockport, New York, numbers about 160 head. Four world champions for production in different classes may be seen there under one roof, including *Sophie's Emily*, the leading Jersey cow for lifetime production. *Sophie's Emily* has so

far produced 7,030 pounds of butter fat and 143,348 pounds of milk. This yield is equivalent to 8,787 pounds of butter and 66,673 quarts of milk, or sufficient to supply a family with a quart of milk a day for 183 years.

At each sailing of the liner *Majestic*, six thousand quarts of milk are brought for her stores from the huge Meridale Farms, 2400 feet above sea level at Meredith, New York. There Wilfred Fry makes his herd of 1,000 Jerseys a great business enterprise. When Mr. Fry's father-in-law, N. W. Ayer, the advertiser, founded the farm years ago, he established several creameries in the neighborhood to help the poor farmer. Today Mr. Fry is president of the Meridale Dairy, which supplies over 50 per cent of all the milk and cream used by outgoing ocean liners.

The Jerseys on the estate of Otto H. Kahn, of Kuhn, Loeb & Co., at Cold Spring Harbor, Long Island, have no deeper purpose than to supply the Kahn table with milk, butter, and cream. Mr. Kahn has interests enough in music and the theatre, and Mrs. Kahn, who manages the estate, is more interested in her Italian garden than in her cows. Not so Senator Carter Glass, of Virginia, who can become passionately excited about his Jerseys. Mr. R. A. Long, of the Long-Bell Lumber Company, has made his magnificent herd of Jerseys on his big Longview Farm in Missouri self-supporting by the sale of creamery products and surplus stock. Arnold H. Goss, deeply interested in Kelvinators, combines business with pleasure by keeping Jerseys on his Oaklands farm at Ann Arbor, Michigan, and keeping the milk fresh by use of Kelvinators on his milk wagons.

II.—Holstein-Friesians

OF ancient, honorable lineage is the Holstein. Tacitus wrote about its ancestors when the ancestors of its Dutch breeders were low country barbarians. "They owned," said the Roman, "cattle, not excelling in beauty but in number." What Tacitus said of the Holstein then is the truth of the matter in the United States today. Holsteins are not the prettiest dairy cattle in America, but there are approxi-

mately 600,000 of them in the land maintaining their reputation for abundant milk production. Large and black and white, they are the nearest to an independent American breed of dairy cattle. The United States has developed a breed of sheep, two of horses, and three or four breeds of hogs, but no race of cattle is native to its soil. But American breeders have made important contributions to the improvement of foreign breeds. The detail of importation has no value in Holstein cattle. It has been more than twenty-five years since any were imported, and the records of performance of American Holsteins surpass those made by the cattle of Holland.

This largest breed of our dairy cattle has as perhaps its leading breeder a man reputed to be one of our youngest millionaires. R. V. Rasmussen is in his early twenties. Single, an athlete, he adds to his life in his father's National Tea Company a passion for the breeding of Holsteins on his Elmwood Farm at Deerfield, Illinois. At the 1929 National Dairy Show his bull, *Sir Fobes Ormsby Hengerveld*, was named grand champion. He also won championship on his bull calf, *King Bessie's Korndyke Ormsby*, and his cow, *Forum Vesta Diamond*. With these champions and other fine animals, his Holstein herd has dominated dairy shows for the last several years.

The lady of Holsteins is Congresswoman Ruth Hanna McCormick. She may be attending the sessions of the House in Washington or campaigning for the Senate in southern Illinois, but always with her rolls and coffee in the morning, she receives printed slips from her automatic recording thermometers at her Rock River Farm near Byron, Illinois. This daughter of the opulent and ubiquitous Mark Hanna and the widow of the late Senator Medill McCormick has made her farm of Holsteins a paying institution. Holsteins are almost as dear to her as her Republicanism, and she talks about Jersey cows as if they were Democrats. At one time she was chairman of the extension committee of the Holstein-Friesian Association. At all times her chief pride is the low bacteria content of the high grade, and incidentally high priced, certified milk which she sells in the Chicago market. Often she communes with ex-Governor Frank O.



VITAMINS REACH HER MILK THROUGH VITA GLASS

KENAN JERSEYS GRAZE AT THE KENAN FARM NEAR LOCKPORT, N. Y.

Lowden, who keeps his herds on his farm near Oregon, Illinois, on the plight of the farmer and the superiority of the Holstein.

In the 1929 National Dairy Show, the insane asylum of Jefferson County, Wisconsin, won the ribbon for grand champion Holstein cow with *Johanna Pietertje Artis Creamelle*. From the asylum, Harvey Firestone has bought her to add her glory and her blood to his herds of Holsteins on his two farms in Ohio. Another prize-winner at the national show, *Carnation Inka May*, has also recently joined the Firestone herds. These animals will add to the reputation of the famous show herd of Mr. Firestone and add their milk to that produced on the Firestone farms, which already sells in Ohio cities at 40 per cent above the regular market price.

A year ago, Owen D. Young, chairman of the board of the General Electric Company, went abroad as one of the American representatives at the Reparations Conference. He left behind instructions that he be advised of new developments at Van Horne Farm, near his birthplace at Van Hornesville, New York. There, since 1907, he has kept a herd of Holsteins, and during the last few years official testing of the production of cows there has been carried on. Upon the completion of one notable production record, the information was sent to Mr. Young by radiogram. A reply came back through the air the same afternoon. It was, he said, the best news he had received since landing in France.

III.—Guernseys

VERY like his Channel Island cousin, the Jersey, is the Guernsey. Only on the islands of Guernsey, Alderney, Sark, and Herm, from which breeders still bring them to America, have they grown larger than the Jersey; they have grown also less beautiful. They are much less decorative for an estate, but as milk producers they surpass the Jersey. Among the chief friends and breeders of the race are James Cash Penney and William H. Williams. They own many of the champion bulls and cows of the tribe, which in the pastures of America number about 175,000.

Mr. Penney is a mortal man. Some day he must go the way of all flesh, leaving behind his department stores, his millions, and his cows. But in his mortal lifetime, Mr. Penney has conferred immortality upon his herd of Guernsey cattle at Emmadine Farm, Hopewell Junction, New York. Unwilling that the race sprung from his bulls, *Caroline's May Royal* and *Resolute's Eminent*, and his cows, *May Royal's Flower*, *Fayroyal's Evangeline*, *Valor's Fair May*, *Mixer May Royal*, and *Langwater Foremost*, should degenerate in dispersal, he has endowed Emmadine Farm so that the breeding work which he has planned may go on in perpetuity.

"Other projects which their founders desired to prolong after their departure are perpetuated by endowment," says Mr. Penney. He sits

in his office, where he presides over his more than 900 stores, besides a bronze bust of his former herd sire, *Foremost*. Around him are cups and medals won by his cattle. "Why not endow a herd of cattle? . . . Should I pass on tomorrow the work would continue without interruption. Continuity and perpetuation—these were the results desired for our herd; these are the results assured."

While some of his mortal life remains, Mr. Penney occupies himself with his cows. He has never read a novel in his life. He plays Canfield solitaire and breeds his cattle. In Indiana he owns a second herd of Guernseys. In the South he is also interested in Guernsey breeding. Along with his department stores, it is his passion. Many of his stores are in agricultural districts, and Mr. Penney believes that better cattle will make richer farmers. Richer farmers will buy more goods from the J. C. Penney Stores.

If not assured of immortality, the herd of ninety-five Guernseys which Mr. Williams, chairman of the boards of both the Wabash and the Missouri Pacific railroads, keeps at Camp Aiyupka, Lyon Mountain, New York, is assured of all that cattle could ask in this present life. Mr. Williams is a thorough man, an autocratic man. In cattle, as in railroads, he has what he wants. About six years ago his desires turned to cattle. He determined upon Guernseys because he felt that they were less highly bred than Jerseys and that there was more room for improvement in the breed. Startlingly he began his activities in cows by paying \$15,000 for one cow at his initial appearance at a public sale. Since then he has attended in his private car practically all important sales and shows. He purchased for \$25,000 *Shuttlewick Levity*, who has completed a world record for milk production and who has twice been grand champion Guernsey cow at the National Dairy Show. For the bull, *Langwater Eastern King*, he paid \$35,000. Almost every week-end the Williams private car stands on the siding at Camp Aiyupka. Every night he talks to his superintendent on the telephone. At the 1929 National Dairy Show his herd won first in every class for cows in milk.

Clarence Dillon, of Dillon, Read & Co., is probably more exclusive with his cows than any other breeder. He went himself to the island of Guernsey to select some of the animals for his herd of ninety-five at Dunwalke Farm, Bedminster, New Jersey. He has a definite breeding program, will not permit an animal to leave his farm unless it is to be disposed of permanently. His cows are not shown at exhibitions, but official testing of the production of the cows is carried on and one world record was recently completed there. These measures almost eliminate the chances of the herd becoming infected with any of the serious bovine diseases.

A scientist in cattle breeding is E. Parmalee Prentice, lawyer son-in-law of John D. Rockefeller. On his Mount Hope Farm, situated in the foothills of the Greylock Mountains of Massachusetts, he has become one of the foremost genetic students in the country. One of his most recent discoveries is what is termed "a method of indexing bulls to determine just what their progeny will do when they come into milk." Type, Mr. Prentice says, means nothing. The important thing is the cow's ability to produce.



FROM THEIR BEDS, MR. AND MRS. PETER H. B. FRELINGHUYSEN CAN ADMIRE THIS MURAL, SHOWING THEMSELVES AND THEIR FINE JERSEYS, PAINTED BY EDWIN MEGARGEE

Vanishing Backyards

Mrs. Rockefeller and the garbage collector join hands with the birth rate to pick up the country. Mr. Burchfield and Mr. Steiner record the American scene which is passing.

It is the nature of youth to be wasteful. A child, quietly playing with his toys, feels within himself the sudden, repressible surge of his abundant energy and smashes the playthings. Indifferently, then, he leaves the broken toys, the waste he has created, scattered over his nursery . . .

It is the nature of age to be tidy. Patiently the child's nurse gathers the scattered pieces, commits them neatly to the wastepaper basket . . .

Age knows, of course, what youth ignores—knows that if the pieces were not picked up, by the next day the litter

would be deeper, and by the following day deeper still, until in time the child could find no place to sit on the floor, until at last the litter mounted to the ceiling and engulfed the house.

. . .

Recklessly, like a child, America hurls its refuse out the window, and doesn't care how high are piled the tin cans in its backyard. Because its backyard is so big. Almost indefinitely it seems to stretch beyond the horizons of the cities.



Courtesy Rehn Galleries

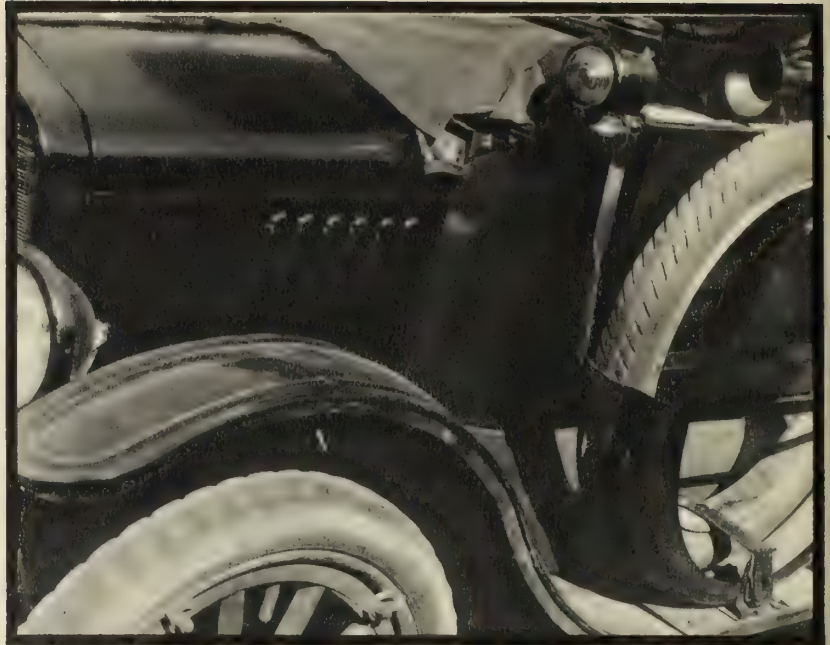
"CIVIC IMPROVEMENT"—BY CHARLES BURCHFIELD



Ralph Steiner

If, suddenly, the new church and the new school and the new apartment house spring up beside the tin cans, it is easy to cart them down the road a mile or so. Or across the river. Or down by the railroad tracks. Back go the fringes of the city, the deadlines of order. Back into the open country where fields are dedicated by billboards to liver pills or pop or hotels with rooms at \$1.50 and up. Here one may make a mess. No one cares.

Thus young America. But England, like a nurse or a mother, prudently tidies up. Neat are the rosebushes and the



Ralph Steiner

cabbage patches in her back yards, and infinitely neat the hedges which bound them. The fringes of her cities recede into an ordered countryside. It is a sign of age and forethought and caution.

Essentially, the English scene is sad and the American scene is happy. It is smelly, but it is also exuberant and vigorous to strew the country with things worn out and left over. Every garbage dump, every row of ramshackle houses lining the railroad track, is evidence of our boundless wealth. This is space we do not need. We have so much. Actually,



Ralph Steiner



Ralph Steiner

we have about 3,000,000 square miles in which our cities are swallowed up. England has about one-sixtieth as much and a population almost one-third as large. Thus upon a square mile of English earth must live in amity and cleanliness seven hundred persons, but within a square United States mile only thirty-nine need be confined. Throw a tin can from an English back door, and it is apt to land in a neighbor's yard. The next-door neighbor in Kansas or Oregon or Georgia or Vermont is so far away that it is easier to write him a letter than it is to pay him a visit.

On these pages, FORTUNE prints a portfolio of the work of Messrs. Charles Burchfield and Ralph Steiner. Each has concerned himself with the American scene. Each has rejected artificial drama and the excitement of the accidental. Together they have assembled a record—not of the new America, its skyscrapers, its airplanes, its dynamos—but of the America which remains unregenerate, its back porches and backyards, its ugliness and its waste.

Such a panorama America can afford, yet this is a record of things which are passing. Some, like the rocking-chair, the curious architecture of the small town, give way to new, modern, and possibly improved schools of taste. Others, like the absurd, hideous posters which are plastered across the country, like the tree-choppers denuding a street in the name of boulevard lights, give way to more general agreement as to what constitutes progress. Still others—the streets of mud and the littered fringes of the cities—will move farther and farther into the hinterland until finally they disappear. Year after year more people must cluster within the square United States mile. By the year 2000 we expect a population of



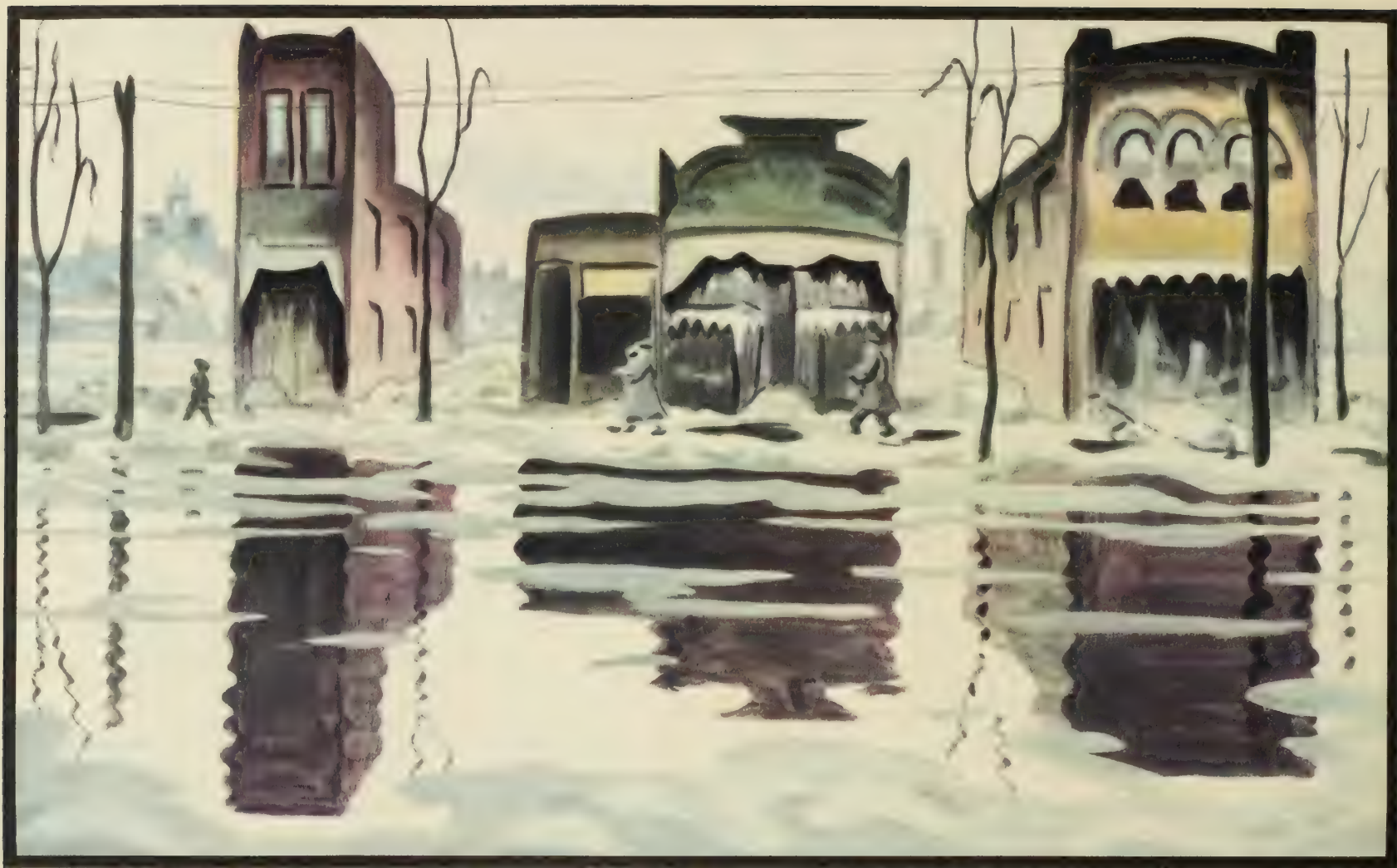
Ralph Steiner



Ralph Steiner



Ralph Steiner



Courtesy the Brooklyn Museum

"FEBRUARY THAW"—BY CHARLES BURCHFIELD

185,000,000, and 225,000,000 a century later. Steadily the next-door neighbor moves closer and the tin can becomes more offensive. Neatness is forced upon us, not because we like it, but because of the vigilance of our neighbors and the policeman around the corner.

Hence we must commend Mrs. John D. Rockefeller Jr. and Mrs. Henry Ford, whether or no we regret the passing of our days of reckless plenty. These are the vanguard of a great army which will shortly be picking up behind our feet and under our noses. Mrs. Rockefeller thinks hot dog stands ugly stains on a green countryside and moves energetically to replace them with neater, prettier kiosks. Mrs. Ford conceived that clean, shiny booths would sell more apples and soft drinks than dilapidated booths and, to prove her point, she herself operated a clean, shiny booth near Dearborn. Sears, Roebuck thought to turn an honest penny out of Mrs. Ford's theory, and is prepared to distribute any one of three ready-cut wayside refreshment stands. The designs of these three buildings, undoubtedly pleasing, were the result of an art competition. The National Committee for Restriction of Outdoor Advertising (Mrs. W. L. Lawton, chairman) has succeeded in making 258 national advertisers restrict their heretofore ubiquitous billboards. Others in this kitchen police force are the Woman's National Farm and Garden Association and the National Council for Protection of Roadside Beauty.

Here is the esthetic appeal. Mr. Ivy Lee, the most distinguished of all public relations counsels, has an immediate, practical reason for urging neatness. On the window of every subway car of the I. R. T. system is displayed, now and again, a poster called the *Subway Sun*. Inasmuch as the subways carry

approximately 3,000,000 persons each week day, and inasmuch as Mr. Lee's office is the editorial room of the *Sun*, he might be said to be the publisher of the journal with the world's largest circulation. In this journal Mr. Lee has often pleaded with subway passengers to keep New York clean, not to throw papers about, or skins, or peels . . . Sadly he computes that seven tons of waste paper and other litter are collected from subway cars and platforms every single day. It costs money to clean up such a mess. And the mess is unhealthy.

One highly important aspect of picking up is typical of a country becoming increasingly economical. Each year brings new and profitable discoveries of the uses of scrap. This is true not only of metals (and the scrap market is exceedingly keen), but of such unrelated things as stiff hats (from which is extracted shellac at Somerset, Massachusetts) and cotton rags (made into bread wrappers in Kalamazoo). The tire companies are jealous of revealing their methods for reclaiming old rubber, but in Korea and China old tires are made into shoes. The housewife, perhaps, does not realize that the tin cans she disposes of will be reclaimed and remelted to form sash weights for her windows and toys for her children.

The list is long and varied. Not to be forgotten are the garbage removers, who point out that in Manhattan alone rubbish and garbage, ashes and dead animals could, at any rate theoretically, be utilized to a gross of \$5,000,000 a year (the very quantity of the refuse and the immediacy which health laws demand in its destruction has, however, thus far prevented authorities from much probing of this curious

mine of wealth). Nevertheless, in the United States garbage reduction plants produce \$8,250,000 worth of grease annually and of fertilizing tankage, \$2,500,000 worth. In some American cities the municipal government actually makes money from its garbage. During five years a Manhattan company paid the city \$487,500 for garbage delivered to certain parts of the water front; the Melrose Paper Stock Company has a monopoly on Manhattan's waste paper and pays \$1,053 a month for it; Carrizo and Izzo pay \$536.99 a week for reclamation of bottles (the price of cast-away bottles has exactly doubled since the Eighteenth Amendment); the Brooklyn Ash Removal Company, Inc. pays \$4,000 a month for its pick of ashes. Dead animals are particularly valuable. Broken down chemically, they yield grease and glycerine, valuable in the manufacture of soap; the hoofs give glue; the intestines are sold to meat packers for sausage casings; the bones are utilized in fertilizer or lampblack according to market demand; the hides are sold separately, not a few of them ending up as coats. Nor, though one does not often see them, are cities lacking in dead animals. In Chicago, in one year, a private contractor collected 50 sheep, 1,949 horses, 49,504 dogs, 980 cats, and 39 other animals which he was content to call "miscellaneous."

Garbage, like most general nouns, is a relative term. You

eat your cake and like it and it is good food. But leave it half finished and what you have left of a sudden becomes garbage. Thus, perhaps, to a trained eye a pile of garbage might indeed be a thing of beauty. Such trained eyes are, however, notoriously rare. Certain cities, aware of the rarity of this quality, have tried to beautify their garbage disposal plants. In Nuremberg, Germany, the plant is embowered with fruit trees and flowers. Visitors pick strawberries, and cavalier garbage men twirl red roses in their teeth as they work. In Sausalito, California, there is Garbage Park. Here, surrounded by the fragrance of flowers, Oakland's garbage, like the pale, unloved Elaine, puts out to sea from a burgeoning shore.

All too rare, one regrets, is this delicate and lovely approach to garbage. Only in cities like Sausalito or Nuremberg where esthetic municipal directors exist. But gradually we shall become more crowded, and our need for order will increase. And with that increase will come greater and more exquisitely fragrant Garbage Parks, and backyards that are neater and more cheerful. Mrs. Rockefeller could not accomplish it alone, nor Ivy Lee, nor public health authorities, nor the garbage removers. But together they will weld esthetics and sanitation and economics into an irresistible force on the side of tidiness. Already, in the midst of our abundance, we are beginning to pick up. The child grows older.



Lent by Mr. A. C. Goodyear to the Museum of Modern Art Exhibition "Nineteen Americans"

"THE PROMENADE"—BY CHARLES BURCHFIELD

Cheap & Smart

R. H. Macy & Co. has three bedrock policies. It has also a chewing gum remover and a bank. But Macy's could scrap all these and still be distinguishable from the average department store. The secret lies in Smart Merchandising.

THE biggest store in the world is to be found at Broadway and Thirty-Fourth Street in New York City. Incredible as the unicorn would be the Manhattan housewife who has never done her shopping at Macy's. Last year R. H. Macy & Co. did a gross business of \$98,688,487, from which it made a net profit of \$7,863,503. There is, it is true, a contender for the title of world's champion store: Marshall Field & Co., of Chicago. The issue is complicated by the fact that Marshall Field has extended its activities far beyond its Chicago store. Since it does not give out separate figures for its main store, it must remain a mystery whether it is larger than Macy's or not. Though Marshall Field's store has 2,762,710 square feet of selling space as compared to only 624,000 in Macy's store, its average number of employees is less—9,000 as against 10,000 for Macy's.

Whatever its relation to the other stores of the world, there can be no doubt as to Macy's relation to the other stores of New York. Its annual sales volume compared with that of the other big stores in New York is as a river to a brook. No other New York store can touch its daily average sales volume of \$322,700 or its 94,500 transactions every day. Macy's is a thriving specimen of a typical distributing agency: the department store. For the buying and selling of the 3,200,000 articles of merchandise in its stock, Macy's has developed what might somewhat pretentiously be called its own philosophy of distribution.

Policies

To the young men and women from Vassar, Columbia, Yale, and other colleges who come to learn the department store business in its Training Course, Macy's announces three bedrock policies:

1. It buys for cash.
2. It sells for cash.
3. It aims to undersell its competitors in the metropolitan district by at least 6 per cent.

There is nothing extraordinary about cash buying. Most of the big department stores buy for cash, though not all of them pay as quickly as Macy's does. The one and only object of paying cash is to secure discounts. Thus the speed of Macy's payments depends entirely on the manufacturer's terms. "5%: 10 days" on an invoice means a 5 per cent discount for cash within ten days. Batteries of checking clerks see to it that the bill is paid so as to secure both the maximum time and the maximum discount.

Not cash but specification buying is the outstanding Macy buying policy. A walk through the drug department will be illuminating. Here at a counter—glossy as is most of the store furniture—is a display of tooth pastes: Pebecco, Forhan's, Kolynos, all the national brands—and also a concoction labeled Macy's Prophylactum Dental Cream. And over here are Macy razor blades cheek by jowl with Gillette blades, Macy Milk of Magnesia rubbing shoulders with Phillips' and Squibb's. If we approach the counter and ask for a package of Gillette blades, like as not the girl will try to sell us some Macy blades instead. She will say, and truly, that the only essential difference between the two blades is in price, which favors the Macy product by about twenty-five cents for a package of ten. To her the Macy blades are "M.O.M." (Macy's Own Merchandise). In the grocery department are cans of Lily White peas, bottles of Lily White ketchup, of Red Star Ginger Ale—all trade-marks owned by R. H. Macy; in the radio section are Macy tubes; and, of course, the store has its own line of Saybrooke men's suits and shoes.

In that now classic work, *Your Money's Worth*, Messrs. Chase and Schlinck advise housewives to buy no more nationally advertised disinfectants, but rather to buy some lye and borax from the grocer and make up their own disinfectant at about one-twentieth the cost. Mr. Schlinck spent many hours in Macy's before he wrote his book. He could not have gone to a better place. For Macy's buyers roll their own in an amazing number of cases. They draw up their own specifications and take them to a manufacturer instead of passively choosing from what he has to offer. He makes them up a line of goods to be sold under Macy's own brand name in direct and active competition with nationally advertised products. And Macy's does a little manufacturing itself, chiefly mattresses and grocery products. Whether made up specially or manufactured in Macy's own shops, M.O.M. is a very real competitive threat to national products. The implications of this form of competition, developed in New York most thoroughly by Macy's, are tremendous. The substitution of local markets for national markets is one, the control of the manufacturer by the retailer is another, and the introduction into merchandising of the Fordian principle of vertical production is a third.

Macy's other buying policies are left to the judgment of the 265 members of its buying staff. The buyer is the key man of any department store. He (or she: just half of Macy's buyers are women) is highly paid—and deserves to be. At Macy's the buyer must know his merchandising.

Each of the 149 departments in the store is run as if it were a separate store, and its buyer is as directly responsible for its success as if he were running his own business. Even so fundamental a policy as hand-to-mouth buying is left to the individual buyer. If he is running the china or linen department, he will do most of his buying a long time ahead; but if he is in charge of novelty handbags, his buying will probably be hand-to-mouth. From department to department buying practices vary, according to the merchandise and the judgment of the individual buyer. One thing on which all Macy's buyers agree is that there is no point in buying for price. There are some department stores that would buy the proverbial carload of 1890 derbies if the price were low enough. Not so Macy's, or any other store whose merchandising is abreast of the times. When a manufacturer offers a large lot of goods at reduced prices, the buyer does not always leap at the bargain. If he sees a ready sale for the goods, he buys. If not, he doesn't. Again, though Macy's probably contracts for the entire output of a manufacturer more often than do other stores, buyers do not carry the process to extremes. They know that it is not sound merchandising for a store to become dependent on too few buying sources.

Macy's owes its distinctive position among New York stores to the way it sells rather than the way it buys. Many New Yorkers know Macy's as the store that has no charge accounts and that undersells its competitors. Is there any connection between the two policies? In its advertising Macy's infers that the one is the logical outcome of the other; that cash selling enables it, in good part at least, to keep its prices down. The advantages of cash selling have probably been exaggerated by Macy's on the one hand and unjustly belittled by Macy's competitors on the other. Not much is saved on bad accounts. Last year the average loss of the big New York stores from bad debts was only .17 per cent of gross sales. The saving is chiefly on carrying charges, interest, and bookkeeping. No charge accounts are paid in less than a month, and many, especially the larger ones, are allowed to run many months behind in payment. Cash selling eliminates all such interest charges, it is true. However, there are more fundamental if less spectacular factors behind Macy's ability to undersell its competitors: shrewd buying, effective publicity, and a flair for merchandising all enter in. Macy's size is important in the matter of economy and efficiency of operation. Macy's estimates its average production, per employee per year, at \$10,700, as against an

average \$8,500 in other large department stores.

Inevitably, it has been questioned whether Macy's prices are really 6 per cent lower than those of its competitors. Some of the doubts have been raised by competitors, notably Gimbel's, of which more anon. And one E. C. Riegel has written a book on the subject. A firm, almost a fanatical believer in credit, he is saddened and enraged to see Macy's thriving on a strictly cash basis. Since credit is the backbone of business and the essential oil of industry, Mr. Riegel *a priori* does not believe that a cash store can undersell its credit competitors. There has been one doubting Thomas, however, who is neither a business rival nor a hobbyist. No less an organization than the Better Business Bureau of New York City has questioned Macy's underselling claim. In December, 1925, the Bureau formally requested Macy's to give up its advertising boasts, "Lowest in the City Prices" and "6% Less than Elsewhere." The Bureau, whose membership included most of the big department stores, did not think that Macy's was carrying out its underselling claims. After a long debate, by conference and by letter, Macy's resigned from the Bureau, which, ironically enough, it had helped to found. During the argument, the Bureau made a price survey of Macy's and its competitors which justified the Bureau's stand. But every day Macy's makes such a survey.

From the store at Thirty-Fourth Street a band of spies goes forth every morning in the year. These spies, otherwise known as comparison shoppers, consist of a score of attractively dressed young women and a few prosperous looking young men. All day they go from store to store, poking mattresses at Stern Brothers', trying on suit after suit at John David's, pushing their way up to bargain counters at Bloomingdale's and McCreery's, sizing up novelty jewelry at Lord & Taylor's. They are poor customers because their object is to spy and not to buy. However, they do not hesitate to make purchases when they think they have found a "value" as good as or better than Macy's has to offer. Any such article, whether it be a dinner coat, a cedar chest, or a brassiere, they buy and carry back to the store. If their judgment is correct, the Macy price of the article is cut to 6 per cent below the outside price. These comparison shoppers are sent out to cover sales in other stores, to investigate customers' tales of bargains to be had in other shops, and to make surveys of all the big stores in the city on some one particular article.

Macy's shoppers have one great meeting place: Gimbel's, a block to the south. So numerous and clamorous were Macy's shoppers recently that Gimbel's triumphantly printed a stinging little note in the newspapers:

AN APOLOGY BY GIMBELS

We regret that customers in our house furnishing and drug departments have been inconvenienced lately due to aggressive tactics on the part of young women apparently engaged in checking GIMBELS low prices for others.

We are confident that the futility of trying to undersell GIMBELS will bring these inconveniences to an end.

SHOP GIMBELS AND SEE FOR YOURSELF

Macy's shoppers flock to Gimbel's and vice versa because the two stores are ancient and bitter rivals. Gimbel's somewhat resents Macy's superior attitude and likes to annoy its rival by going under its prices on certain articles. Many a furious battle has been waged over Modern Library books, for instance. There was a time when bookworms could pick up Modern Library volumes at Macy's for 18 cents a copy, as against a list price of 95 cents. Other sensational Macy lows, caused by competition with Gimbel's, Bloomingdale's, and such Macy-baiters, have been: \$1.25 cartons of cigarettes (Camels, Lucky Strikes, etc.) for 74 cents; \$2.74 traveling cases for 84 cents; \$10 "Smokadors" for \$2.24; \$1.39 skating socks for 11 cents; and, most phenomenal low of all time, 12 dozen cakes of hard-water soap for 1 cent. The Gimbel-Macy competition grows more strenuous every day. Gimbel's has recently begun to take cracks at Macy's in its advertising, as:

GIMBELS initiates lower prices . . .
GIMBELS will not knowingly be
undersold.

And, referring to Bamberger's in Newark, bought by Macy's but still a credit store:

The GIMBEL policy is the same in
every city.
We do not sell for cash only in one city
—and allow credit in another.

Most unkind cut of all was the headline:

YOU TRUST US when you shop at
GIMBELS . . . and, of course
WE TRUST YOU!

Clever as are these attacks on Macy's policies, they miss the main point about Macy's. Take away cash selling and "lowest" prices and you would have an altered Macy's, but one that would still be recognizable. And also, one may add, a Macy's that is still distinguishable from Gimbel's and the other stores. The essence of Macy's lies not in its policies, but in something much vaguer and more important, something which might be summarized under such a heading as Smart Merchandising.

Merchandising

Indefinable, but important, are the effects of smart merchandising. Macy's has achieved a certain "tone," a distinctive manner in the conduct of its business, that is more valuable to it than all its policies; famous and traditional as these are. This tone may be crudely suggested by adjectives: progressive, sophisticated, modern, scientific, alert, enterprising. Or it may be more convincingly set forth in terms of realities:

A.—Parade

Nothing better expresses the spirit of Macy's merchandising than a certain ribald event that occurs yearly on Broadway. Every Thanksgiving Day a weird procession of enormously billowing clowns, horses with hoofs as big as table-tops, and rollicking sea serpents a block long winds its way down Broadway. In attend-

ance on these monsters, whose uncouth rubber hides are swelled tight with helium gas, is a riotous crew of imps and clowns. On every day but this they can be seen, dressed in more conventional costumes, behind Macy's counters, riding Macy's delivery trucks, and working in Macy's warehouses. When the mad procession reaches the store in Herald Square, the balloons are released. Macy's offers a reward of \$50 for every one that is recovered. Fortune has not smiled on these balloons, cleverly designed by Tony Sarg. Last year they skyrocketed straight up into the air a couple of miles until the pressure burst them into pieces. This year Macy's got all sorts of scientific and meteorological advice. The advertising department, in charge of the parade, had faint hopes of a favorable wind wafting their Katzenjammer balloons across the Atlantic. But the day was so cold that the helium gas became dense, and the Captain and the Kids hardly left the ground. Even to get them into the air, the Captain's legs had to be amputated, the Inspector's beard trimmed. One of them, however, landed in a Long Island village a hundred miles away, where there was a community riot to get fragments of it. Unhappily, there is no truth in the report that the great Krazy Kat dragon floated out far over the Atlantic and appeared as the sea serpent of sailors' tales to the terror-stricken crew of a Danish sailing vessel.

B.—When nighties are in flower

Thus the headline of a recent Macy advertisement for a sale of nightgowns printed with floral designs. The text continued: "A romantic era's upon us . . . Gowns (both for night and day) must be feminine, pretty, romantic. These are . . . quite Directoireish in spirit . . . So if you are timid about appearing definitely Directoireish in the daytime, try being Directoireish at night." A decade ago department store advertising was notoriously cut and dried, barrenly factual, lacking in all grace, wit, and humor. Knowing that its customers searched out its advertisements every day and read them as faithfully as their husbands read the stock quotations, the department store did no more than baldly announce merchandise and prices. A few years ago Macy's began to inject interest into its advertising copy. Still more revolutionary, desperately so, was the introduction of humor. To advertise Wilton rugs or short vamp ladies' shoes in a bright and airy fashion was as unprecedented as if Dillon, Read should wax humorous over a Brazilian bond issue. Macy's advertising is written as skillfully as any national advertising—and with rather more sophistication. Its tone is due mostly to Kenneth Collins, who at thirty-two is Macy's publicity director. He has signs posted in every office in his department, including his own: "Avoid Superlatives: They Lead to Exaggeration." The contrast with the old drum-pounding method is obvious. So effective has this light touch proved that Macy's advertising is bought by out-of-town stores and reproduced verbatim, down to cuts and layouts, in local papers. Weil, McGinnis & Sloman, Inc. act as brokers in Macy's ads for stores all over the country, and for a few in foreign parts. But such bright ideas as

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PORTRAIT OF JESSE ISIDOR STRAUS—BY ERNEST HAMLIN BAKER

Jesse Isidor Straus

Portrait of a Harvard Overseer, a smart business man, and a patriarch.

THE store of R. H. Macy & Co. is about as far from the horsehair tents of Syria as a man could get. The tents stand in the pastoral silence, under the prophetic stars. Macy's rattles to the iron clatter of New York, under the illuminated clock faces and the crowded towers. They have nothing in common. Nothing except the person of Mr. Jesse Isidor Straus.

Not that Mr. Jesse Isidor Straus would look happy or appropriate or even probable if you met him somewhere beyond Homs and Palmyra, where the Bagdad wheel tracks cross the ancient migration of the Wells. You do not see well-dressed, intelligent-looking, middle-aged Harvard Overseers following the camels in those parts, and not even Mr. Straus's tall, lean figure and large eyes, nor the desert-bred nose and cheek bones of his race, would give the image reality.

And not that you would be apt to find a department store in Manhattan conducted in a patriarchal manner by a visionary and somewhat impractical man whose moving purpose in life was the preservation of his family and whose deepest emotion ran toward his children and his children's children to the uttermost generation. Or if you did find such a store there would assuredly be red ink corpuscles in the balance sheet.

And yet Mr. Straus is the president of Macy's which, as everyone knows, is a not altogether unprofitable nor altogether unprogressive business. And Mr. Straus is as nearly patriarchal a figure as the Western World can show. Which does not mean either that he is ancient (he is nearing fifty-eight) or that he wears a vast grey beard (he is clean-shaven and his hair has not yet turned). He is patriarchal in the sense that the desert is patriarchal. He is the head of his house and of his people. He has one love, his tribe—both that which bears his name and that which bears the name of his business. And his concern is not with today nor with the day after today but with the future.

Mr. Straus's great contribution to Macy's is "the organization." The store is known for its power to hold the loyalty, and often the real affection, of its employees. It makes use of the methods of Babbitt, but somehow Babbitt himself becomes humorous and honorable and decent in Thirty-fourth Street. The saleslady who is told that she must share the organization's spirit believes what she is told. There is a spirit there to share. The place is human. And Mr. Straus is responsible for that humanity. He really cares himself—and not in the scientific, godlike way of the usual business "welfare" man whose concern is with the statistics of contentment.

The value of his general executive service has the same source. Patriarchal administration has to do with the future and the past. The head of the tribe is always a prophet. He has seen much and his fathers before him. Therefore he is able to see beyond. So it is with Mr. Straus. His mind is occupied with a future beyond his own life, and his judgments, looking toward that future, are (or have been: for the future, to the rest of us, is blind) exceedingly sound. In such matters, and in his judgments of men, his associates are accustomed to defer to his decisions. But in immediate matters, tomorrow's program of sales or purchasing or advertising, his bright young

men are less willing to defer. They could wish that Mr. Straus looked farther off and longer, not so near.

The true test of the patriarch, however, is his own tent. This is the center and purpose of his life. Mr. Straus's is well pitched, in pleasant places, and well filled. His home is Northview, a country estate above Mt. Kisco, New York. The house stands upon a hill. Its terraced lawns slope away in British perfection. It has its walled garden, its tennis court, its swimming pool, its cared-for flowers. There is a farm below with a handsome herd of Jerseys and the finest chicken houses in all Westchester County. There are pigeons and ducks and turkeys. There are greenhouses among trees. And the place is running over with grandchildren. Isidor II, known to the world as Jack, lives on the estate (he calls his house, for adequate reasons, "Noview"), and his two children and the children of his elder sister, Mrs. Levy, who lives near, are in and out all day. The Jerseys and the chickens are for them—to give them the best milk and cream and butter and eggs and broilers money can produce. Three times a week in winter supplies are sent by truck to the four Straus families—Mrs. Levy's, Jack's, Robert Kenneth's, and their father's—in their apartments in New York. The four apartments are in a single building constructed for that purpose by Mr. Straus. His intention was not to simplify the truck deliveries from the farm but to save himself. In the old days, when they lived in separate houses, Mr. Straus, who calls upon his children and his grandchildren every day, found that his dinner waited and his nights were short.

The domestic life of the family has the formal element which always appears when a family is conscious of its own existence and aware of the authority of its head. There are a great many servants, and the house at Northview is beautifully kept up and as well run as a British country seat. Mr. Straus's part in it is one of attention and appreciation. He lets his children talk and is content to listen. He watches his grandchildren's faces with the expression of a man concentrated upon a world beyond himself. And he delights in their affection. When, as invariably happens, he is induced to tell some chance visitor his favorite, pointless mushroom story, and his descendants greet it with ironic laughter and loud moans, he is pleased and happy. The little ritual is as eloquent a witness to the love and the respect in which his children hold him as any ancient tribal rite. It is his due and tribute as his people's head.

The patriarchal life runs backward as well as forward. Jesse Isidor Straus is the son of that Isidor Straus, brother of Nathan and with him founder of the fortunes of his blood, who died on the *Titanic*. When that first Isidor died, his wife, who could have saved herself, refused to leave him and was drowned. Now, many years after, Jesse Isidor, his son, takes every occasion to remind himself and those about him of his paternity. He insists that in all public statements his middle name, with everything it connotes, should be written out in full. He thinks of himself as continuing his father's life and name. He thinks of his children and his grandchildren as continuing his own. American, modern, Western though he is, the East is in him, the patriarchal blood.

"It's Smart to Be Thrifty" and "No One Is in Debt to Macy's" cannot be sold, must remain associated with the store.

C.—Pants tester

Science in retailing, as opposed to rule-of-thumb methods, received much of its impetus from Macy's. Its Planning Department, a collection of efficiency experts who pry into the amount of cord it takes to tie a package and the energy wasted by cashiers in gum chewing, was a pioneer in its field. And the vital Bureau of Standards was also established long before such a thing became the rule. At one time or another, almost every type of merchandise in the store is put through its paces in this Bureau. The fading propensities of draperies are tested with a Fade-Ometer; the amount of quicksilver used in mirrors is determined; tension machines pull silk threads until they snap, register the breaking point. If a mother brings back a pair of boy's knickers and complains about the way they have worn, the Bureau of Standards is called in on the case. A serious young man in a white coat takes Willy's former pants, puts them under a shower, notes how much they shrink on drying, and earnestly tests the seat to see how it wears. His researches may show that Willy, rather than the pants, has been at fault. If, however, mother turns out to be right, the buyer at once takes the report to the manufacturer and asks him to explain. There is practically nothing the young man in a white coat will not test. He will investigate anything from golf balls to moth balls. He wears down rugs on abrasion machines, tears men's suits apart to see how strong the seams are, uses a special machine to burst holes in silk stockings, and runs through a dozen dry cleaning and perspiration tests for dress goods. The Bureau itself is unprepossessing enough: a not very large room cluttered up with piles of clothing, toys, groceries, blankets, sofa pillows—all in a rather dilapidated condition. There are various weird-looking instruments standing about, attended by eight or ten men and girls dressed in white. Unimpressive as it is, the Bureau's place in Macy's is obviously important.

D.—"Art in Trade"

During a vacation in Europe a few years ago, Jesse Isidor Straus, Macy's president, came across some gaily colored enamel ware. Alert, as always, to seize on new merchandising ideas, he brought the pots back with him, showed them to his buyers. Thus was born "color in the kitchen," a movement that brought style into a region hitherto unknown to it. Again, one of the Strauses, vacationing in Italy, ran across some old parchment books. He brought them back and had lamp shades made from the parchment, a style inspiration that has put parchment shades on the lamps of American homes. Macy's has done much to form the taste of the housewives of New York. In 1927 and 1928 Macy's held "Art in Trade" exhibitions at which were assembled chairs, tables, china, linen, household furnishings designed by artists in this country and abroad. The good people of Manhattan thronged to gaze at modernistic pianos and futuristic water glasses. Among other more or

less direct results of these "Art in Trade" exhibitions is the success of that corner of the furniture department in which is assembled a collection of modernistic furniture unequaled in any department store in the city. The splendid modern rugs on the sixth floor and the delicately tinted modernistic china and glass in the basement are also fruits of the "Art in Trade" days. To keep its own and its customers' tastes pure and abreast of the times, Macy's employs a squadron of stylists in various unexpected places: china, stationery, furniture, household furnishings, and adult games, to mention a few.

Progress

In its parade, its advertising, its testing bureau, and its exploitation of style, Macy's is sophisticated and modern. More, these things show imagination. They are typical of the adventurous progressive spirit that leads Macy's to do things and sell goods that few department stores think of selling or doing. Macy's has a grocery department that is in a class with Charles or Park & Tilford. The cooks of many a Park Avenue establishment order their marrons and mushrooms from Macy's. Along the long delicatessen counter one finds such oddities as bloaters, roll-mops, gaffelbittars, Milwaukee goose breast, and blood rings. And such table luxuries as pickled mussels, matjes herring, *pâté de foie gras*, and caviar, red and black. To leap from gastronomy to esthetics—Macy's sells works of art as casually as Milwaukee goose breast. In its picture galleries hang paintings, sketches, etchings by young artists. The buyer for its oriental art department is a connoisseur who can select jade, ceramics, and metal work that will find customers among collectors as well as housewives. There are unexpected corners in Macy's: a Closet Shop, devoted solely to the decoration and furnishing of closets; a Boudoir Shop; a Chintz Room that is bright and gay with every imaginable sort of chintz.

Certain of the 149 departments have been built up until they are famous throughout the city. The five most important departments in sales volume are furniture, drugs, house furnishings, silks, and toys. Few stores, if any, regardless of price levels, have a more complete and more modern stock in these departments than has Macy's. Its rayon exhibition in 1928, wherein mannequins paraded twice a day dressed in Parisian style creations in rayon, is written into the history of that newly born textile. And at Christmas time Macy's toy department, spread out over several acres of floor space, means to the youngsters of today what Schwarz's meant to an earlier generation of New York children. The drug department is not only more complete in its stock than most drug stores, but it is also incredibly low priced. So low, in fact, are the prices that the common belief is that Macy's is content to lose vast sums annually on its drugs for the sake of the pulling power of the department. The same idea is also attached to the neighboring book department, which does a business of some \$2,000,000 a year. Certain it is that more varieties of cod liver oil and more editions of *The Forsyte Saga* can be found in Macy's stock and at considerably lower prices than in any other Manhattan department store.

From the "general store" of our forefathers, whose shelves bore only the necessities of life and those in no great plenty, to the imported jewelry and dry-point etchings of Macy's is a long span of merchandising. As the goods for sale have multiplied, so have the complexities of selling them. The general store got along quite well with a clerk or two behind the counter and a boy to run errands. At Macy's the clerk has multiplied a thousandfold, and the boy has expanded into a fleet of 420 motor trucks. More, there have come into being a great number of jobs not remotely suspected in the days of the general store. There is, for example, Mr. Q. F. Walker, the store economist. He watches trade levels, economic currents, the price of gold with an expert eye, and once a month tells the assembled buyers how his observations may or may not affect Macy's. There is, also, the chewing gum remover, who roams the building after hours applying chemicals to gum left behind by careless shoppers. He can do away with any amount of gum in any conceivable location. Carpets alone have him stumped, for he cannot remove the gum without also removing the pattern. The general store would have had as little use for Economist Walker as for the chewing gum specialist.

Economist Walker holds his job because Macy's has become far more than a store. It is rather a huge center of distribution, into which pour the goods of thousands of manufacturers to be pawed over, priced, inspected, and eventually bought by millions of housewives. Thus it comes about that though Macy's is primarily concerned with buying and selling, only 40 per cent of its employees are engaged in these activities. It is also notable that less than half of the 1,565,404 square feet of space in the buildings at Herald Square is selling space, to say nothing of the 711,159 square feet in the big Long Island warehouse. And thus it also comes about that Macy's has branched out into all sorts of non-merchandising services. Her "training squad" of young college graduates was among the first of such organizations. To train these cubs there are classes and examinations under special teachers, an expensive process whose value cannot be even approximately discovered. For its employees Macy's runs a cafeteria, a medical clinic, and a year-round camp at Burlingham, New York. For its customers Macy's has a large restaurant (whose menu is unique, being entirely in odd-figured prices, as roast sirloin of beef, 98 cents; club sandwich, 64 cents), a post-office, and a staff of interpreters. The purchase, last spring, of Bamberger's big store in Newark added to Macy's extra-curriculum activities a magazine (*Charm*) and a large radio station (WOR).

Macy's also runs a bank. The Depositors' Account Department (briefly termed the "D.A." throughout the store) is a characteristically ingenious Macy idea. The problem was how to save customers the necessity of paying spot cash, often irksome in the case of large purchases, and yet not allow charge accounts. C.O.D. sales were one answer, and Macy's probably has more C.O.D. deliveries than any other store in the city. The drawback to C.O.D. is that often the cash is not forthcoming on delivery, and the

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The Vanderbilts

No living Vanderbilt would assemble such a photograph album as FORTUNE here prints. Why?

IN the middle of the last century, a curt, uncouth young man stormed and swore his way out of the peasant obscurity of Staten Island and gave meaning to a name. Before Cornelius the van der Bilts had been poor, dull, and shiftless. After him they were sometimes dull and often shiftless, but they were not poor. Nor were they obscure.

In all, Cornelius wrung about \$100,000,000 out of the young country which emerged from the Civil War into the Industrial Age. Far the greatest part of this he added in the last twelve years of his life, when he was an old man, when he suddenly saw, in proper proportions, the Railroad. It is unjust to Cornelius Vanderbilt to group him with Drew, Fisk, and Gould and label him pirate and buccaneer. There is a sharp distinction. Drew and Fisk and Gould soiled everything they touched and left it poorer, but Vanderbilt left it richer. His hands were rough and greedy; they were also the hands of a builder.

This is the important thing to remember about him and his other qualities, nearly all of them unpleasant, are merely local color. He was suspicious, secretive, and superstitious. Toward his wife he never displayed a generous or a kindly thought. In 1845, worn out with childbearing, bitter with loneliness, she poured forth her grief at being moved from Staten Island to friendless Manhattan. Vanderbilt gave her a ruthless answer, perhaps the most ruthless he ever made. He locked her up in Dr. McDonald's asylum in Flushing. Later he released her, at his mother's command. For those who take comfort in such things, it is gratifying to know that he was good to his mother.

In 1877, when Owen D. Young was three years old, Cornelius Vanderbilt died. There was not a sound organ in his great, coarse body, but he left one of the soundest properties in the world. He had built the New York Central Railroad.

When the first Rothschild died, he was avidly anxious to preserve his fortune, and he saw his fortune as his family. Therefore he divided his money between his five sons and bade them love one another. When Vanderbilt died, he was equally anxious to preserve his fortune, but he saw his fortune as a lump sum of money. Therefore he left \$90,000,000 of his \$100,000,000 to his son William Henry and let the others shift for themselves. He said, "There will be hell to pay for it," and there was.

William Henry was an able man, although he had been twisted and warped under the hammer of his father's contempt. He was dour, prudish (his large art collection held no nudes), but not ungenerous. To his brother Cornelius, a drunkard, epileptic, forger, and gambler whom

his father loathed ("I'd give a million if he'd never been named Cornelius"), William Henry gave a million dollars. A curious whim led him to pay \$103,000 to move Cleopatra's Needle from Egypt to Central Park. But the most important use he made of the fortune was to turn over 300,000 shares of New York Central stock to John Pierpont Morgan for sale abroad. This was an extremely happy transaction for all concerned. It brought William Henry about \$36,000,000 in cash, netted the Morgan firm about \$3,000,000, started the bank's railroad career, enormously enhanced Mr. Morgan's reputation, and attracted much foreign capital to the United States. William Henry worked hard on the fortune, perhaps he thought he worked too hard, for when he died he split it, now nearly \$200,000,000, between his son Cornelius (husband of the present Dowager) and his son William Kissam.

Through the hands of these two, the fortune passed safely and profitably. Cornelius became the director of thirty-four railroads, nursed the New York Central through two panics. William Kissam took over the Lake Shore railroad and made it the bright star of the Vanderbilt system. When Cornelius had worked himself into a breakdown, William Kissam assumed the full load of responsibility and carried it with credit. He was a sportsman and a good judge of horses,

but he was also a railroader. He was the last.

The Vanderbilts have come a long way from the Commodore. The fortune, still large enough, is widely scattered, and the family is destroyed. No common denominator except a name can be given to Gladys, the hostess; to "Neely," the journalist; to Harold, the card-player; to Consuelo, the sad, lost Duchess. Between them they still own 200,000 or 300,000 shares of New York Central stock, but the railroad which spans the thousand miles from New York to Chicago cannot link one marble Newport villa with another.

The Commodore once shouted "Law? What do I care for law? Hain't I got the power?" His descendants have not the power, but most of them have pondered the divorce laws of two continents. Restless, unstable, they move from desire to desire with no fixed star. Many are not without ability, but with the exception of Gertrude and the elder Cornelius, none has produced any useful thing. Distinctly they are not in the traditional shirt sleeves, nor are they likely to be. Just as distinctly, they are not a family in the full tide of its vigor and fecundity. The Commodore, surveying this gallery, would stamp and curse and then, from a busy mind, would contemptuously expel his descendants.

A moralist, dolefully brooding upon this endowed chaos, might find it essentially a tragedy in timing. The Commodore was born at the right time for ruthless acquisition. But his children and children's children were born fifty years too early to inherit.

To the second and third generation of Vanderbilts and to their contemporaries, great money was simply a means of escape from its sordid source. Hence the ugly and vulgar running after European title and position. Today, John D. Rockefeller III enters the Standard Oil Co. of New Jersey with a will to make good in the patriarchal business of which he was taught to be proud. No such ambition was characteristic of little Vanderbilts.

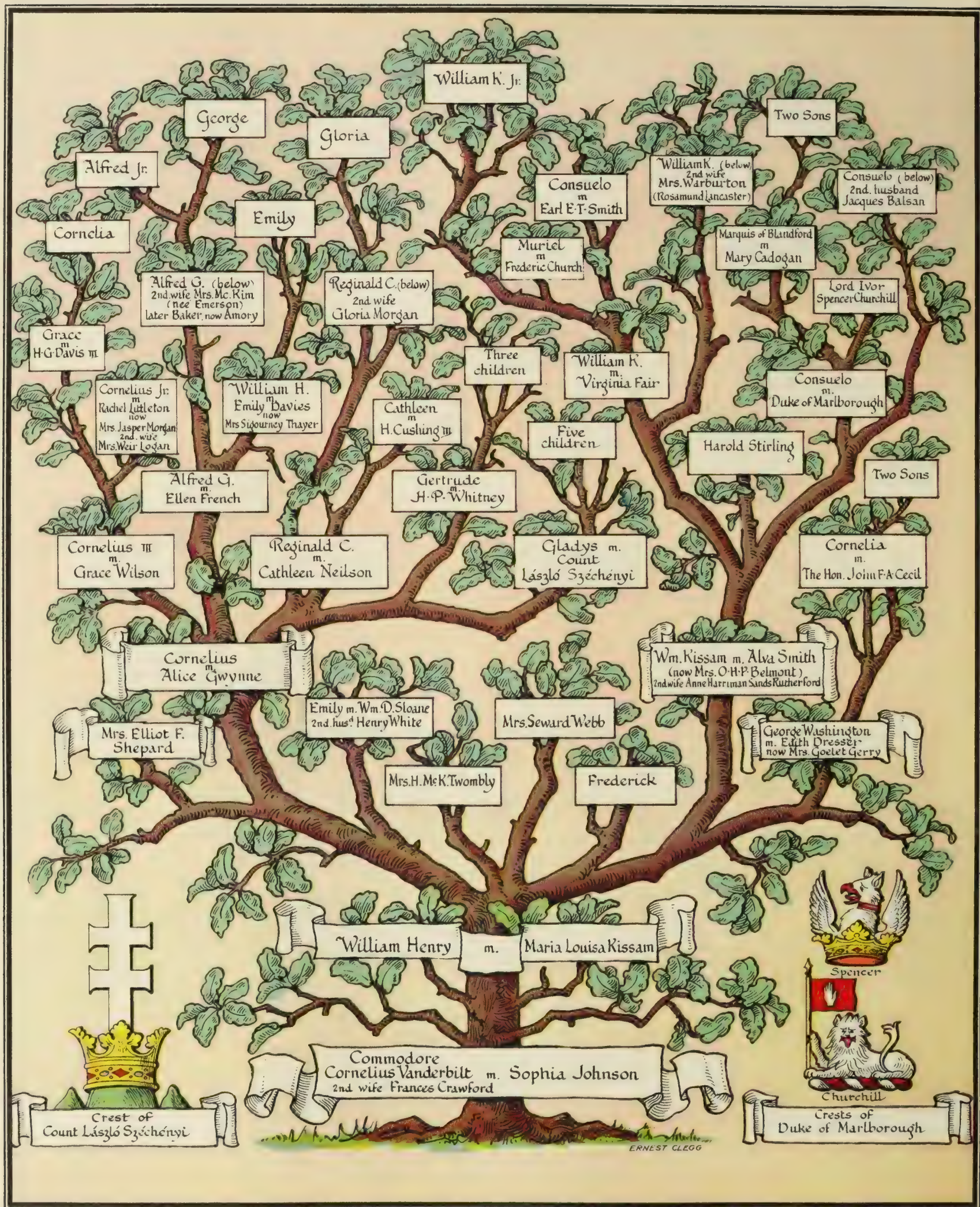
Indeed, there was nothing in America that seemed as worthy of a fortune's solicitude as a smile from a foreigner. True, when a Vanderbilt died, another Vanderbilt gave a dormitory to Yale, a very nice dormitory, the best of its day, but, after all, costing less than a season in London. In our own times, a Harkness dies, and in his memory there rises a quadrangle, the equal in majesty of an entire European college.

It now seems America and things American are worthy of an American fortune, however great. But two generations ago, it seemed not to be so. The Vanderbilt fortune was a fortune without a country to match. Inheriting Vanderbilts had only themselves to consider and that, tragically, was not enough.



Culver Service

COMMODORE CORNELIUS VANDERBILT



BRANCHES OF THE VANDERBILT FAMILY TREE

SHOWING THE CHIEF LINES THROUGH WHICH THE COMMODORE'S FORTUNE HAS PASSED. OTHER LINES, EQUALLY IMPORTANT TO GENEALOGISTS BUT NOT TO BANKERS, ARE HERE OMITTED



Underwood & Underwood
GENERAL CORNELIUS VANDERBILT

THE present Cornelius Vanderbilt Sr. was first an engineer. While he was still a young man he invented a cylindrical tender accepted by both the Union Pacific and the Southern Pacific. Later in his life he became a soldier. He went to the Mexican border, in 1915 became chairman of the National Defense Committee, and in the World War won the rank of Brigadier General. General Vanderbilt is quiet, self-effacing, modest, his sole gesture in the direction of display being the museum of his uniforms, stuffed and cased in glass, placed in his front hall. He is extremely fond of his wife (below), whom he married against his father's wishes, accepting his disinheritance without complaint. (Later, his brother Alfred gave him \$6,000,000.) Mrs. Vanderbilt is unquestionably the most distinguished hostess in New York. To 640 Fifth Avenue come practically all visiting royalties and celebrities. Last year Mrs. Vanderbilt bought "Beaulieu," the former Astor villa at Newport.



Underwood & Underwood
MRS. CORNELIUS VANDERBILT



Cameragrams
THE DOWAGER MRS. VANDERBILT

THE Dowager Mrs. Vanderbilt, widow of the second Cornelius, has been called the loneliest figure in American society. William Henry was her eldest son. Alfred Gwynne was her favorite son, and the wayward Reggie was dear to her. All three died tragically in their prime: William of typhoid at Yale, Alfred on the *Lusitania*, Reggie of dissipation. She feels she has followed more than her just share of hearses to the family plots on Staten Island. From her second son, the present General Cornelius, she was estranged for more than a quarter of a century, and only recently was the breach healed. She is often with her daughter, Mrs. Harry Payne Whitney, and is very proud of her work. Much alone, she rarely goes out, rarely entertains, plays bridge occasionally, but always for low stakes. She dresses simply, wears few jewels, and clung to an aged Simplex (the Vanderbilt livery is maroon) until Mr. Whitney insisted it had become too shabby. Her house, the famous Vanderbilt château at 58th Street and Fifth Avenue, she sold in 1926 for \$7,000,000, buying Mrs. G. Jay Gould's house (where she had never called) in its place. Wrapped in age and dignity, she has been seen only once in a position unbecoming to the Dowager Mrs. Vanderbilt. That was at the wedding of her granddaughter Barbara to Barklie McKee Henry, when her son-in-law, Harry Payne Whitney, tired of her refusal to be photographed, picked her up bodily and held her before the cameras. Later, however, the negative was discreetly destroyed.



International
COUNTESS SZECHENYI

WHEN Washington learned in 1926 that the turbulent New Year's Eve balls of the Edward B. McLeans (*Washington Post*) were ended, it also learned that the tradition would be taken up by the Minister from Hungary and his lady, the small, dark, musical Countess Szechenyi. On such occasions the former Gladys (sister of the General) Vanderbilt allows her guests to choose between dancing under bright lights and listening, in a dusky room, to Tzigane (gypsy) music.



Wide World
CORNELIUS VANDERBILT JR.



P. & A. Photo
MRS. CORNELIUS VANDERBILT JR.

IN 1923, Cornelius (Neely) Vanderbilt Jr., (preceding page) son of the General and brother of Grace (Mrs. Henry Gassaway Davis III, below), bounded nervously to Los Angeles to begin his "career." He had been a newspaperman for four years; he would now found a clean penny tabloid, to crusade for the Common People. Thus across the editorial page of the *Illustrated Daily News* he paraphrased the traditional Vanderbilt "The Public Be Damned" and inscribed "The Public Be Served." Thus he signed himself "Your Publisher." The Served Public bought newspapers as readily as the Damned Public had bought railroad tickets, and for a time circulation totals climbed to gratifying heights. Then came bickerings, instability, disaster. With a Napoleonic gesture, Neely launched two more newspapers (San Francisco, Miami) when clouds were darkest; the gesture cost him and his family \$3,000,000. Now he wanders from point to point, writing distressingly indiscreet articles about society. Amiable, adolescent, he smiles and giggles his way through a confused life. His first marriage was to Rachel Littleton, his second to a Mrs. Weir Logan (above).



Underwood & Underwood
MRS. HENRY G. DAVIS III

FAR the ablest of the living Vanderbilts is Gertrude, Mrs. Harry Payne Whitney. A serious and enthusiastic artist, she has modeled such important sculptures as the Titanic Memorial at Washington, the Eldorado Fountain in San Francisco, a heroic statue of Buffalo Bill, and a statue of the American doughboy at St. Nazaire. In these heroic memorials Mrs. Whitney is happiest; her small bronzes have had no great success, and it is not known that connoisseurs collect Whitneys.



Underwood & Underwood
MRS. HARRY PAYNE WHITNEY

CHARMING are the Vanderbilt babies, charming and often centers of much discussion in which there is little charm. One such is Gloria Vanderbilt (below, right), daughter of hard-drinking, hard-gambling Reggie by his second wife, Gloria Morgan. Reggie died of internal hemorrhages in 1923. Living with her mother in Surrey, England, small Gloria awaits her coming-of-age to inherit about \$6,000,000. By her birth a trust fund of \$5,000,000, which otherwise would have gone in its entirety to her half-sister, Mrs. Harry Cushing III (below), was split into two parts.



Underwood & Underwood
MRS. HARRY CUSHING III



Underwood & Underwood
WILLIAM HENRY VANDERBILT

A SERIOUS and intelligent Vanderbilt is a young William Henry, son of Alfred Gwynne. He is a Rhode Island senator, on the board of the Newport Hospital (which is not a desultory job), president of the Casino Stock Company (at Newport), director of Thompson-Starrett Co., Inc. and of the American Arbitration Association. Some time ago, he bought control of the motor bus system between Providence and Newport. Thus his public and professional life. He has not been able to avoid the familiar domestic difficulties, his marriage to husky, blonde Emily Davies ending in divorce after two years. Last December he married Anne Colby. A habit which delights the Portsmouth countryside is to don his gay father's coaching costumes and take out the coach *Venture*.



Cameragrams
GLORIA VANDERBILT

ONE THING in common the two elderly women (right) may remember: each was the wife of William Kissam Vanderbilt, ablest grandson of the Commodore. But far from proving a source of unity, this common interest proved the beginning of a long and costly war. It was the first Mrs. Vanderbilt (now Mrs. Belmont) who established the family's claim to New York social leadership with the great fancy dress ball of 1883, an event which so impressed Mrs. William Astor, in anticipation, that she paid Mrs. Vanderbilt her first call. The career, thus begun, reached its zenith, in 1895, with the marriage of her daughter Consuelo (right) to the scandalous but extremely noble Duke of Marlborough. This marriage, the classic example of American society's climb to prestige, cost William K. Vanderbilt \$10,000,000, provided society with the most glittering spectacle of the century, and sent Consuelo to the Duke's great estate of Blenheim. Fifteen years later, before the tribunal of the Rota at Rome, Mrs. Belmont testified that she had forced her daughter into the marriage. It was then annulled and the Duchess, tired, wistful, and deaf, could marry a Catholic ex-army officer named Jacques Balsan. She lives on the Riviera, quietly.

The ducal wedding, however final for Consuelo's youth, did not end Mrs. Belmont's battles. In 1895 she divorced her husband, in 1896 married O. H. P. Belmont, and in 1903 saw Mr. Vanderbilt marry the daughter of Oliver Harriman. At once began a struggle for supremacy which enlisted ballrooms, butlers, birth control, soup kitchens, and the drug evil. Mrs. Belmont welcomed no one at Marble House (Newport) who had entertained Mrs. Vanderbilt. From Deauville, Mrs. Vanderbilt retaliated by becoming the principal American hostess in France. When the War came, she established the great hospital at Neuilly and worked there twelve hours a day. She returned to New York and moved to No. 1 Sutton Place, starting the residential colony there with her lifelong friends, Anne Morgan and Elizabeth Marbury. But she found life unpleasant. Three husbands had died (William K. in 1920), two sons were killed in automobile accidents, two daughters were involved in the love cult of Oom the Omnipotent. She sold 660 Fifth Avenue for \$4,000,000. Now Mrs. Vanderbilt is rarely in New York, often abroad. Mrs. Belmont, reconciled with Consuelo, travels with her in Egypt. The war is over.



Underwood & Underwood
MRS. O. H. P. BELMONT



Underwood & Underwood
MRS. WILLIAM K. VANDERBILT



Underwood & Underwood
HAROLD STIRLING VANDERBILT



International
MME JACQUES BALSAN
Consuelo



Underwood & Underwood
LORD IVOR SPENCER CHURCHILL
Consuelo's Son



International
MRS. EARL E. T. SMITH

BY VIRGINIA FAIR, three children were born to William Kissam Vanderbilt II. Muriel, a healthy woman with the family's healthy love of horses, made the usual brilliant Vanderbilt marriage (to Frederic Cameron Church) and followed it with the usual Vanderbilt divorce. Consuelo, named for the Duchess, was a brilliant pupil at



Wide World
MURIEL VANDERBILT CHURCH school. She is now Mrs. Earl E. T. Smith. The son, W. K. Vanderbilt III, is pleasant, curly haired, and rather plump. He has been much with his mother, wandering between Palm Beach and the Côte d'Azur. At the moment he is studying in Paris, an educational move inspired to some degree by the presence in New York of the actress Lily Damita.



WILLIAM K. VANDERBILT III

DO YOU play the Vanderbilt?" is the question most frequently asked at a game of contract bridge. Of late, the "Noes" have had it, as the Vanderbilt Convention (a bid of one club shows three quick tricks in the hand; the partner's bid of one diamond denies two quick tricks) has fallen into expert disrepute. Yet Harold Stirling ("Mike") Vanderbilt (above), the Convention's sponsor, reaps daily profits from his bridge skill, as his publishers (Scribner's) pay him from 10 to 15 per cent royalties on his book, *Contract Bridge*, now in its fourth printing. A bachelor, he has been reported engaged to Eleanora Sears and to Marietta Johanny, the Viennese beauty, who, however, insisted that she was still devoted to her third husband, Baron Styrcia. "Mike" Vanderbilt inherited much of the Vanderbilt fortune, some of its interest in railroading. After a brilliant career at St. Mark's (best pupil) and Harvard (Porcellian), he went into the New York Central's offices as lawyer-clerk. In 1928, he was listed as the holder of 173,030 shares of New York Central stock, about 10,000 shares more than was held by George F. Baker, and now valued at about \$30,000,000.



International

FREDERICK W. VANDERBILT

FREDERICK W. VANDERBILT is the only living grandson of the Commodore. He is now an old man, a widower, the holder of 20,000 shares of New York Central stock. At Hyde Park (on the Hudson) he lives in strict retirement, collecting rare books. He has been a good railroader; he moved creditably through each of the New York Central's departments. One rather curious obsession has remained with him throughout life: he cannot bear being late. And when his wife was alive, they would print upon their dinner invitations: "Dinner at eight o'clock." Then, in red ink, "Promptly."



Keystone

MRS. PETER GOELET GERRY

ONLY one of the four grandsons of the Commodore developed an interest outside the ordinary run of rich men's avocations. That was George Washington Vanderbilt, who proceeded to buy for himself a feudal 130,000 acres lying in North Carolina, between the Appalachians and the Blue Ridge. Here he built a magnificent palace (opened last month to the public), called the place Biltmore. Retainers settled there and built homes modeled after Chesh-

THE current William K. Vanderbilt inherited a considerable share of the fortune and controls, with his brother Harold, the bulk of the family's New York Central holdings. Like his uncle, Frederick W., he is both retiring and industrious. Each day when he is in town he arrives at the railroad's offices at 9 o'clock. He is more a yachtsman than a railroader, however, and the *Ara* has become a familiar sight in many tropical seas. Equipped with elaborate devices for deep-sea fishing, the *Ara* has rivaled the Beebe expeditions, has made one round-the-world cruise, in 1928, to collect sea specimens. At North Port Mr. Vanderbilt has built the largest private aquarium in America.

Other interests include auto racing. He established the Vanderbilt Cup Race, then bought, for \$3,500,000, a tract of land on Long Island extending from Jamaica to Lake Ronkonkomo. Taxation was costly, and the tract today is the Motor Parkway, assessed at \$13,000,000 and piling up an annual revenue of over \$200,000. Other interests emphatically do not include Newport. His mother, Mrs. Belmont, offered him Marble House, but he refused the gift, politely, as he does all things.



Keystone

MR. AND MRS. WILLIAM K. VANDERBILT

ire cottages; young Gifford Pinchot was head forester. Mr. Vanderbilt raised pedigreed hogs, studied farming, and added Indian dialects to his eight languages. Mrs. Vanderbilt established a school to improve the mountain people's methods of hand weaving, an experiment which astonishingly grew into the Biltmore Industries, supplying good cloth to 30,000 customers.



International

MRS. HAMILTON MCKAY TWOMBLY

ON THE whole, the Vanderbilt women, healthy and vigorous, have been superior to the men. William Henry had four daughters, all women of considerable distinction. Three are now living: Mrs. Henry White, Mrs. Hamilton McKay Twombly (above), and Mrs. Seward Webb. At Florham (combination of FLOrence Vanderbilt and HAMilton Twombly) Park, New Jersey, Mrs. Twombly indulges many intellectual tastes, notably her enjoyment of good organ music. Mrs. Webb is widely known as the chatelaine of beautiful Shelburne House (at Shelburne, Vermont).



Underwood & Underwood

MRS. JOHN F. AMHERST CECIL

George Washington Vanderbilt is dead. Mrs. Vanderbilt is the wife of Rhode Island's Senator Peter Goelet Gerry. Their daughter Cornelia—Mrs. John F. Amherst Cecil—travels often from Washington to Biltmore. There she was married with peasants holding lighted tapers, with later revelry by the light of bonfires. There her husband, the Honorable John F. Amherst Cecil, continues to breed a fine line of hogs.

WE ADMIT TO BEING PROUD OF THESE THINGS



FIRST: That in seven years we have built an advertising agency which is generally regarded as one of the five or six ablest in the country.

SECOND: That we have lost only one client due to dissatisfaction with our service.

THIRD: That nine of our fifteen clients first tried our service on one product, and were so happy with the result that they engaged our help on additional products.

FOURTH: That sixty per cent of our growth since the first year has come from additional business given to us in this way by clients.

YOUNG & RUBICAM, INCORPORATED · ADVERTISING
NEW YORK · PHILADELPHIA

Transactions

Condensations and analyses beneath the headlines of the business news.

Consolidated Gas to Absorb N. Y. Steam Co.

Who.—The New York Steam Corporation, which supplies 2,250 Manhattan buildings with steam heat (9,250,000,000 pounds of steam this year) . . .

What.—Was acquired by the huge Consolidated Gas Company of New York (total assets more than \$1,171,000,000), which in its own name and through its subsidiaries already owned considerable stock in the steam company which heats the Grand Central station and the Chrysler Building . . .

Why.—Office dwellers want heat in the morning, light in the afternoon and evening. "Duplicating plant facilities," says Charles A. Gillham, vice president of the steam concern, "could be eliminated because the peak load requirements of the two companies are dissimilar. The peak load of the Consolidated Gas Company is in the afternoon and later, and that of the New York Steam Corporation is in the morning."

HUGE NATURAL GAS COMPANY PLANNED; ANNOUNCE MERGER

Who.—The United Gas Company and the Electric Bond and Share Company, mammoth holding companies which, through their subsidiaries, control some of the largest units of natural gas in the world . . .

What.—Will merge their natural gas holdings in one big company. To the combine the United Gas Company will bring the natural gas properties of Standard Oil of New York's Magnolia Petroleum Company, operating now as the

Magnolia Gas Company, upon which it has an option. United Gas will also bring the four natural gas companies in which, at the time of its formation in 1928, United Gas held controlling interests. Acting through its subsidiary, the Electric Power and Light Company, the Electric Bond and Share Company will put the Louisiana Gas and Fuel Company and that company's subsidiary, the Palmer Corporation, into the merger. The new corporation will furnish 190,000,000,000 cubic feet of natural gas a year to consumers in a territory extending from St. Louis to Mexico . . .

Why.—During the past few years the natural gas industry has shown itself to be the most rapidly expanding division of public utility enterprise. With this merger, the Electric Bond and Share Company, which has always been primarily identified with the electrical end of the utility industry, takes its place toward the front rank of the gas industry.

United Fruit, Roosevelt and Grace Lines Will Build Eleven Fast Vessels.

Who.—Walter Folger Brown, of Ohio, Postmaster-General . . .

What.—Awarded five ocean mail contracts: three to the United Fruit Company for Puerto Armuellas and Limon in Costa Rica and Puerto Colombia in Colombia; one to the Grace Steamship Company for Valparaiso in Chile; and one to the Roosevelt Steamship Co. for Hamburg in Germany. The awards call for the building by the lines of eleven fast vessels for foreign trade with an aggregate tonnage of 80,000 tons at a cost of about \$40,500,000. The three companies will receive \$2,423,394 the first year under the awards, and increasing payments as new tonnage is added during the contracts' ten years . . .

Why.—Said Postmaster-General Brown: "This is an important step in carrying out the program which President Hoover has laid down to take up the slack of unemployment."

ASSOCIATED OIL JOINS IN BIG JAPAN PROJECT

Who.—The Mitsubishis, whose interests in mining, banking, shipbuilding, importing, exporting, shipping, and insurance make them the great rivals of the opulent House of Mitsui in financial Japan . . .

What.—Through Mitsubishi Goshi Kaisha, the family holding company (capital: yen 120,000,000 or \$60,000,000), they formed with Associated Oil Company of California, which produced 14,838,514 barrels of oil in 1929, the Mitsubishi Oil Company, Ltd. The company, with headquarters in Tokyo, will have a capital of yen 5,000,000 . . .

Why.—For the purpose of manufacturing and marketing petroleum products in the East. Crude oil requirements of a huge refinery, now being built near Tokyo, will be furnished by Associated from its California wells.

Chase Tops All Banks in Merger Of \$2,800,000,000

Who.—The biggest bank in the world, the Chase National Bank of New York (resources \$2,814,535,000; deposits \$2,073,644,000) . . .

What.—Was formed by merger of three New York banking institutions: the Chase National Bank (resources \$1,714,829,447; deposits \$1,248,218,351); the Equitable Trust Company (resources \$1,013,970,798; deposits \$625,427,575); and the Interstate Trust Company

(resources \$85,735,389; deposits \$60,081,602) . . .

Why.—The new bank will be \$600,000,000 greater in resources than either the second largest, National City Bank (resources \$2,206,241,000; deposits \$1,649,554,000), or the third largest, the Midland Bank of London (resources \$2,169,212,000; deposits \$1,833,038,000).

SAY BISCUIT CO. SEEKS COAST FIRM

Who.—The National Biscuit Company, the world's largest manufacturer of biscuits . . .

What.—Plans to acquire the Pacific Coast Biscuit Company, which made \$522,676 in 1929 from biscuits and candies manufactured for the peoples of the western states, the Hawaiian Islands, the Philippines, and the Orient . . .

Why.—The acquisition, which would give the National Biscuit Company a desired outlet on the Pacific Coast, is believed to be a part of the new expansion plan announced by National Biscuit last fall when its capital stock was increased.

ALASKA PACKERS BUYS CROSBY CO.

Who.—The Alaska Packers Association, salmon canning subsidiary of the big California Packing Corporation ("Del Monte," "Sun Kist") . . .

What.—Acquired the Crosby Fisheries, Inc., Seattle salmon company, and its fleet, including the *Salmon King*, one of the largest vessels used in the salmon industry, for a reported \$250,000 . . .

Why.—The California Packing Corporation, since its organization in 1916, has been expanding aggressively to include, for packing and distribution, all the chief food products of the West Coast.

[Continued on page 136]

When there's no time to think!



WHEN the "whole world" is thundering toward you . . . when devil-may-care folks "cut in" and "cut out" . . . *that's when things happen* . . . when there's no time to think!

The time to think is *now*! More traffic! More risks! All the more need for automobile insurance—and *plenty of it*!

An Aetna Combination Automobile Policy can be written with Liability and Property Damage limits of any amount needed to protect you against high damage awards. Protection *all ways—always*, wherever your car takes you.

Aetna writes practically every form of Insurance and Fidelity and Surety Bonds. Aetna protection reaches from coast to coast through 20,000 agents.

Aetna Casualty and Surety Company—Aetna Life Insurance Company—Automobile Insurance Company—Standard Fire Insurance Company of Hartford, Conn.



AETNA-IZE

SEE THE AETNA-IZER IN YOUR COMMUNITY—HE IS A MAN WORTH KNOWING

Budget for \$17,000 in Athens

The mutation of dollars into drachmas or marks makes for pleasant living. In general, a European budget; in particular, an Athenian.

(Prompted by FORTUNE's recent publication of a Chicago Budget for \$25,000 and a New York Budget for \$50,000, a temporary expatriate, in the U. S. Consular Service, who prefers to remain anonymous, has offered his own budget of American dollars spent in a European city. His city is Athens; his income, \$17,000.)

THINKING that the actual expenditures of an American residing permanently in Europe might be of interest to my compatriots in Volstead Land, I have set down my actual average expenditures for the past three years.

I am married and have three small children. I have an income of \$17,000 (\$11,000 from securities and a salary of \$6,000). My actual experience covers residence for some years in Berlin, Paris, Vienna, and Athens. While I am at present residing in the last-named capital, the accompanying table shows my actual outgo for the past three years, and probably forms a fair cross section for most parts of the Continent. The figures are actual results, not a budget, because my wife and I find it difficult, psychologically, to attempt to adjust our living scale to a prearranged plan. My only object in keeping accounts was to find out why drachmas, marks, francs, and shillings were just as elusive as the artful dollar.

Taking the table in order, the rent item of \$1,700 pays for an unfurnished house of eight rooms two miles from the center of the city. It includes a large garden, chicken coop, garage, stable, and gardener's house. Judging by my experience in America in pre-radio days, I pay somewhat less than the same quarters would cost in the States.

Food, including dinner parties and the cost of feeding four or five servants, is on the whole cheaper than in America, varying with the agricultural character of the country of residence.

But it is the item of servants' wages that will squeeze the briniest tears from the ducts of my jealous American readers. At present I am paying \$110 monthly for a good chef, an English governess, butler, maid, and a general yardman and gardener. The servants think nothing of working from seven in the morning until midnight and are delighted when a dinner party is given, because of the Continental custom of tipping on the part of the guests.

Fuel, laundry, household expenses, sports, clubs, doctors, dentists, schools, and theatres are all somewhat cheaper than would be the corresponding items in America. My expenditures for doctors and dentists are less than our Chicago or New York friends reported in their budgets, but who am I to reproach them if their families insist upon being separated from an occasional appendix or a lackadaisical set of tonsils.

I suppose by this time my unhappy reader is casting envious glances at certain bibulous items. (Quick, Watson, how many bottles of whiskey at \$1.20 and gin at \$0.65 will \$200 buy? Watson, your perspicacity in immediately concluding that the writer is not a missionary is to be commended.) In explanation of the low prices of joy-water, I must add that my position ordinarily enables me to import personal wants without duty. For that reason, we buy our linens in Belgium,

BUDGET FOR ATHENS	
Rent	\$1,700
Food	2,100
Wages	1,200
Fuel	250
Laundry	200
Household expenses	250
	\$5,700
Drugs, cosmetics	\$ 100
Whiskey, gin	200
Wines, liqueurs	130
Beer, soda	70
Hairdressing	50
Tobacco	70
Newspapers, magazines	60
Tailor, cleaning	60
Flowers	60
	\$ 800
Sports	\$ 70
Auto expenses	700
Clubs	70
Dentist	80
Doctor	60
Clothes, wife	800
Clothes, me	400
Clothes, children	360
Presents	200
Language lessons	200
School	100
Theatres, restaurants	250
Summer vacation	1,000
Other trips	1,400
	\$5,690
Rugs	\$ 280
Furs, jewelry	100
China, silver	110
Furniture, pictures	680
Books	70
Laces, linens	60
	\$1,300
Taxes	\$ 20
Insurance	480
	\$ 500
Otherwise unaccounted for	400
SPENT	\$14,390
SAVED	2,610
	\$17,000

clothes in France or England, glassware in Italy, rugs in the Near East, wines in France, spirits in England, canned goods and our occasional motor in New York at wholesale. We are also able to get our American cigarettes out of bond at seven cents the package.

While our travel expenses appear rather high, we find a vacation of a month each year in France or England well
[Continued on page 102]

Faces of the Month

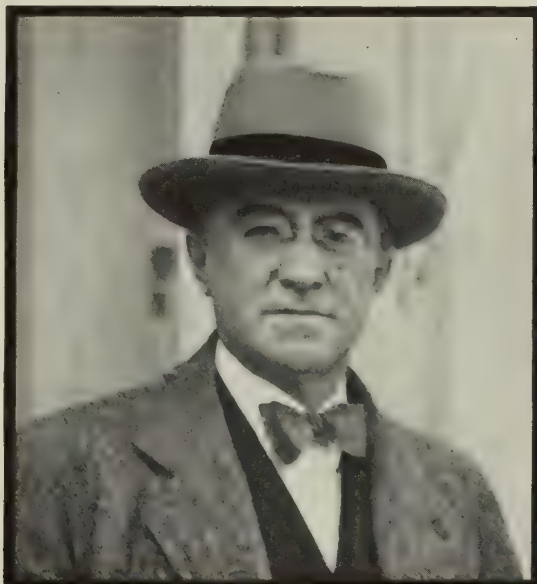


Blank-Stoller

A series of bold, vigorous moves has placed the Brothers Van Sweringen very much in the railroad limelight. The man who will run any railroads they may acquire is their operating chief, John J. Bernet (above). Now president of the Chesapeake & Ohio, Mr. Bernet has done notable jobs of reconstruction on both the Erie and the Nickel Plate.

U. & U.

Few congressmen smell danger more often than Representative Louis T. McFadden, of Pennsylvania (below), chairman of the House Committee on Banking and Currency. During recent talk on the marketing in this country of German reparation bonds, Representative McFadden attacked the International Bank, the Versailles Treaty, the World Court, the League of Nations, the Department of State, the Federal Reserve Board, and J. P. Morgan & Co.



International

William Green, American Federation of Labor head (right) has asked the Senate to do something about unemployment—or face either a dole system or a revolution. Heywood Broun (left) has “done something.” His “Give a Job” campaign in the New York *Telegram* found work for 185 persons in its first two weeks. Often he goes down to the breadlines at 6 A.M. to pick out men himself for the jobs he has been “given.”



U. & U.

At the age of seventy, Professor John Dewey, dean and leader of American philosophy, is retiring from the faculty of Columbia University. No closet philosopher, he has profoundly influenced the course of American education. As chairman of the League for Independent Political Action, which aims to create a third party, he is an important liberal force in politics.

P. & A.



Keystone



U. & U.

These horses have earned more than some corporations, more than all other race horses. First place goes to Harry F. Sinclair's *Zev* (left), who has won \$313,639. Second comes Walter J. Salmon's *Display* (right), with earnings of \$256,376. Third place has just gone to *Victorian* (above), owned by Silas Mason and W. Arnold Hanger. *Victorian* has earned \$251,875 to date, \$98,400 of it by his recent victory in the Agua Caliente Handicap.



P. & A.

Faces of

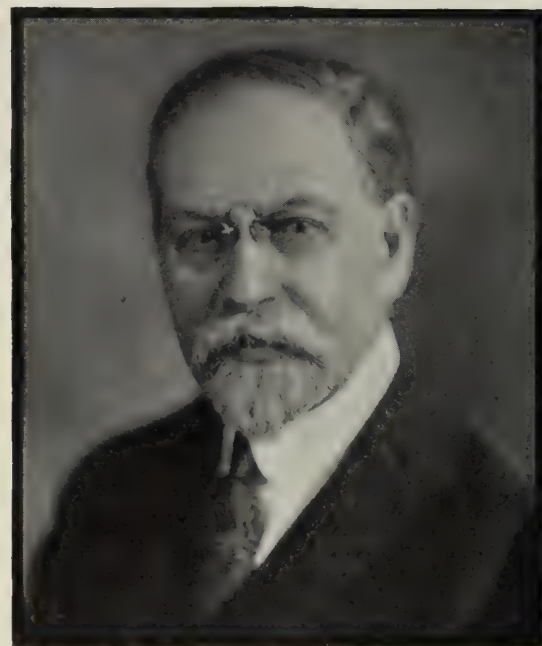


Camerasgrams



U. & U.

Rationalization, long the watchword of German industry, has at last reached German shipping. A fifty-year pooling agreement is announced by the heads of the two great German steamship lines: President Philipp Heineken, of the North German Lloyd (left), and President Wilhelm Cuno, of the Hamburg-American Line (right). The agreement means the end of competition between two traditional maritime rivals. A joint board will manage the two companies, arranging sailing schedules so as to avoid duplications, making common use of terminals and other properties, and drawing up the balance sheets so as to give each company an equal share of the profits. Each line, however, will keep its separate identity, jealously retain its ancient house flag. Even so, the pool is a bitter pill for the local pride of both Bremen (North German Lloyd) and Hamburg (Hamburg-American). The rivalry between these Hanseatic ports is nearly as old as trade itself. The pool commands 2,000,000 tons of shipping at present, with a prospect of absorbing certain affiliated smaller lines to swell the total to a monstrous 3,000,000 tons, which would top even the Royal Mail's gigantic tonnage.



International

Dr. Edwin R. A. Seligman, economist of weight and editor-in-chief of the new *Encyclopedia of the Social Sciences*, has sold his library to his college. His library: 50,000 volumes on economics, valued at \$1,000,000. His college: Columbia, where he teaches political economy.

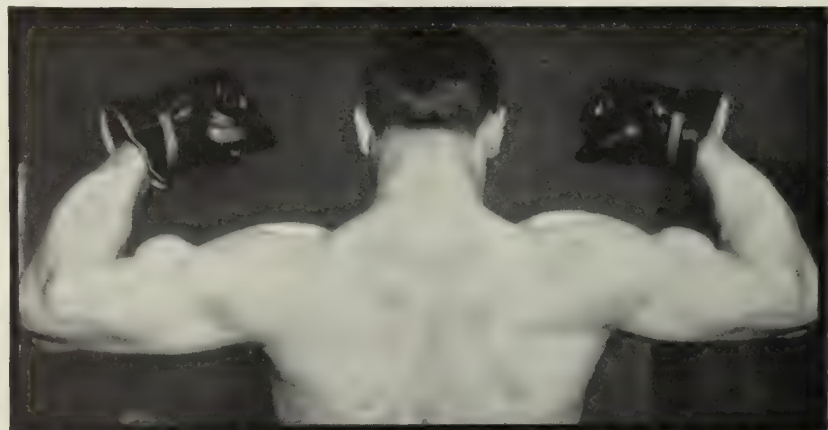


Kepstons



International

Bankers are men of many interests, none more so than Charles Hayden, of Hayden, Stone. *Left:* As engineer on the Rock Island, of which he is chairman. *Right:* As riveter on the new Waldorf-Astoria Hotel, of which he is also chairman. He is driving the first rivet into a steel framework that will climb forty-six stories into the air. Hectic would be Mr. Stone's life if he played similar rôles in each of the seventy-two corporations on whose boards he sits. Among other things, he would swing a pick for Kennecott Copper, bottle pop for Mavis and Coca-Cola, drive a Mack truck, drill Shell Union oil, and pilot planes for Wright Aeronautical.



International

Back of the Month.—This mighty pair of shoulders and the bulging arms adjacent thereto have earned their owner, Primo Carnera, \$103,391 since January. Mr. Carnera acquired this sum by the simple process of knocking out ten men, at an average fee of \$10,339.10 per k.o. Only one of the ten remained conscious for more than two rounds.



Press Clutch

Comrade Y. E. Rudzutak, who heads the Soviet Transport Commissariat, is being heckled by his Comrades on the poor condition of the railroads. The inefficiency of the Commissariat is a popular topic with the Soviet Press. Comrade Rudzutak retorts that he can't run his railroads efficiently because he can't get back his freight cars. Factories and shippers take their time about unloading and returning cars, with the result that there are now more than 20,000 cars (according to the Commissar's figures) standing on Soviet sidings, patiently waiting to be unloaded.

the Month



Keystone

"Any comment regarding the passenger business is necessarily monotonous repetition," glumly remarks Fairfax Harrison, president of the Southern Railway, in his company's annual report. The "monotonous repetition" is a drop both in number of passengers carried (7,000,000 in 1928; 6,300,000 in 1929) and in passenger revenue (\$24,000,000 in 1928; \$22,000,000 in 1929). I.C.C. figures show that the Southern is not unique, that passenger traffic in 1929 declined for the sixth consecutive year. The *Railway Age* estimates that if passenger traffic had kept at its 1920 level, the railroads would now be \$2,300,000,000 richer.



International

Fifteen years ago, Percival Lowell (brother of Harvard's A. Lawrence Lowell), after lengthy and abstruse calculations, predicted that a ninth planet would be found in a certain place in the heavens. A year later he died. On January 21, 1930, a photographer at the Lowell Observatory in Flagstaff, Arizona, "detected an object" on one of his plates. Now the Observatory announces that the "object" was Mr. Lowell's ninth planet, precisely where he said it would be.



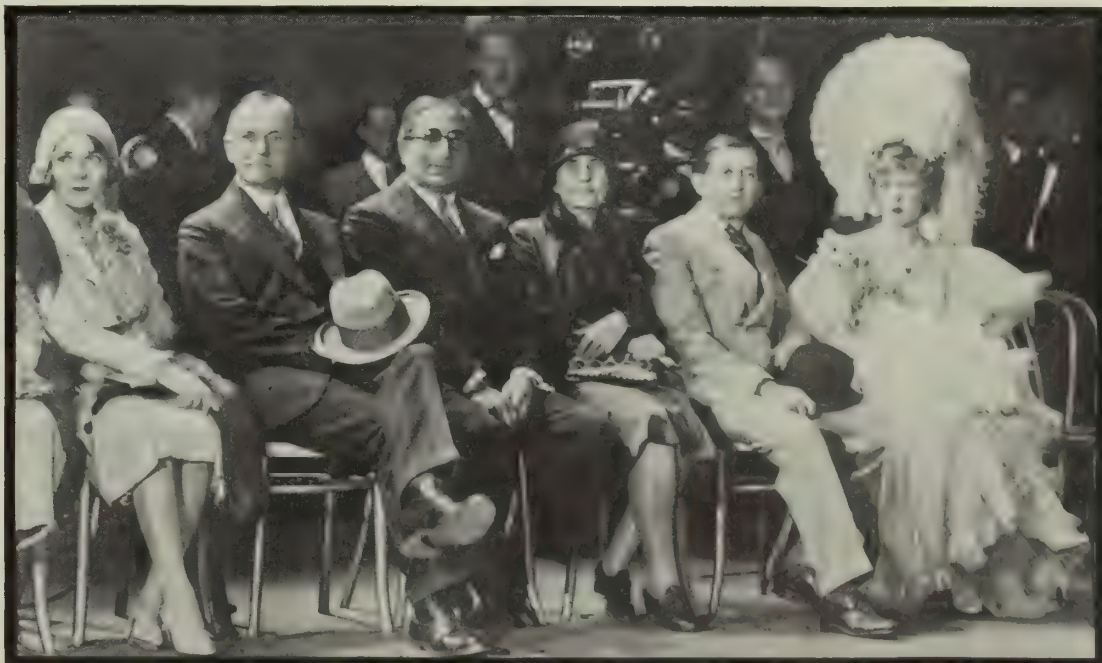
Camerasgrams

"I had no intention of making a record. The *Europa* just walked away with it." Thus Captain Nicolaus Johnsen. "It's a good thing for those few extra minutes . . . Otherwise the *Europa* would have been just another boat." Thus a North German Lloyd official. The *Europa* beat the *Bremen* by just eighteen "extra minutes."



International

On April 8, Dr. William Henry Welch celebrated his eightieth birthday. Not alone did he celebrate. Doctors and laymen met all over the world to honor the venerable dean of American medicine. Dr. Welch has taught at Johns Hopkins for forty-five years, has been a distinguished pioneer in laboratory and public health work since 1877.



International

Rare indeed is a conjunction of planets (and stars) like this one. Left to right: Mary Pickford, ex-President Coolidge, Louis B. Mayer, Mrs. Coolidge, Will Hays, Marion Davies. Dwarfed though he is by the Davies eruption, Mr. Hays is not to be overlooked. Impressively, he has announced a 15,000,000 increase in weekly movie attendance last year. And he has promulgated a new moral code for the movies. Some provisions: "The use of liquor shall be restricted to requirements of plot or character . . . Such subjects as hangings or electrocutions shall be treated within the careful limits of good taste. . . Scenes of passion shall not be introduced when not essential to the plot."

Faces of the Month



Henry Ford's Number-One Man in Europe is Sir Percival Perry, chairman of the Ford Motor Company, Ltd. Of late he has both pleased and peeved Britishers. Pleasing (and to American ears amazing) was his reference to the English Ford as "more honestly British than any other automobile in this market . . . a product of which we, as Britishers, can be very proud." Peeving was a Ford statement released by Sir Percival. Characteristic Fordism: "If some English employers are not efficient enough to pay high wages, the sooner they go the better."



International

Dr. A. A. Mitten, who succeeds his father as head of the extensive Mitten traction interests in Philadelphia and Buffalo, is a dog fancier of note. He is showing off his champion pointer, *Denwood Ada*, which he exhibited at the Pennsylvania Athletic Club Dog Show.



Panajon

No one in France knows more about Bordeaux wines than the Abbé Dubaques—which is saying much. In his laboratory he has been testing, tasting wines for twenty-six years, studying the microbes which are the prosaic basis of the finest vintages. His studies are not academic: they have led to an improved "œnology" (method of wine making) that sharpens the nuances of vintage flavors. Not long ago the Abbé was sent to London by the wine merchants of Bordeaux. His mission: to praise wine to whiskey-and-ale-drinking Britishers.



International

Sir Henri Deterding, head of the Royal Dutch Company (Shell Oil), has been talking long and earnestly across the Atlantic with the partners of Dillon, Read & Co. His telephone conversations have arranged the details of a new \$40,000,000 Royal Dutch offering . . . Debentures can be settled over the telephone; not so spiritual issues. Which is unfortunate, for Sir Henri would rather like to ring up Mahatma Gandhi one of these days. Two Gandhi bogies haunt Sir Henri: (1) that the Mahatma may extend his boycott on British goods to Shell Oil; (2) that a bright competitor may trade-mark his oil "Gandhi," sell it enormously.



Wide World

Of the 100,000,000 people affected by the 1930 census (the number itself depends on the census) these three are chiefly concerned: Robert P. Lamont, Secretary of Commerce; Julius Klein, Assistant Secretary; William M. Steuart, Director of Census. The ratio of two Commerce men to one Census man is significant. The 125,000 enumerators who took the 1930 census asked many questions, gathered much data about the two great economic puzzles: unemployment and distribution. Messrs. Klein and Lamont, and with them all business men, hope this data will throw some light on these dark places.

The **FIRST**
NATIONAL BANK *of*
BOSTON



If your business requires foreign banking facilities you will do well to consult **THE FIRST NATIONAL BANK of BOSTON,** *one of America's outstanding international banking institutions.*



Foreign Branches: BUENOS AIRES, ARGENTINA; HAVANA, SANTIAGO, CIENFUEGOS, and SANCTI SPIRITUS, CUBA. *European Representatives:* LONDON, PARIS, BERLIN.

worth the cost, and an occasional trip "back home" is a necessity if our *a* is not to become too broad.

As for the children's vacation, it costs perhaps one-half or one-third what it would cost at an American summer place.

It will be observed that I spend an average of \$1,300 annually on more or less capital acquisitions such as furniture and rugs. I don't see how one can maintain a house with any mental satisfaction without occasionally picking up antiques, furs, or pictures. Buying such articles advantageously, as I usually succeed in doing, I will find them profitable investments when I eventually return to America, since I shall not have to pay duty if I have owned the articles more than a year. And to take the purely negative side—we are not loaded up with obsolete radios, motion picture cameras, electric refrigerators, and automatic heaters. Having never owned any of the foregoing, and not being high-hatted by my European friends for such an omission, I can, instead, have the family done in oils, or pick up an occasional refectory table. Besides, we honestly get more satisfaction out of our photograph album than we would out of a motion picture machine, an instrument that I found rather detestable upon a recent trip home. We are even naïve enough to prefer tennis to golf, since one is not ostracized for such economical tastes among the Europeans we know.

The \$400 "otherwise unaccounted for" probably slips away in the form of tips, taxis, bridge losses, etc. I have found that to keep accounts of such details is too irksome, and has probably been the doom of more than one family budget.

My cleaning and pressing bills are low, judged by American standards, as the servants expect to do this work. As for shoe-shines, I don't see how Americans can get along with less than one shoe-shine per person per day. In a family of

five that means \$180 per year that the European resident is spared and is probably the origin of that old saying that when Greek meets Greek they start a shoe-shining parlor.

The sum of \$20 for taxes is ever so much smaller than the corresponding item of the man from Chicago, because my salary, being of a foreign source, is not taxable, and my securities are stocks which exempt the dividends from normal tax.

I find that the average of several budgets drawn up by different American savings banks and insurance companies, for persons in my income class, compare with mine as follows:

	AMERICAN BUDGET Percentage	MY BUDGET Percentage
Shelter	19	10
Food	17	14
Clothing	14	9
Operating expense	14	14
Advancement (im- provement)	18	24
Savings	18	19
Capital expenditure (furniture, etc.)	0	10
	100	100

If I were a Will Durant, I suppose I could find material in the above comparison to show the different standards and *mores* prevailing in Europe and the United States. It does seem to show that Europeans are less likely to go in for the good old American sport of keeping up with the Joneses, with a resulting increase in savings and property acquisitions. From my own observation, I am convinced that there is a good deal of truth in this banal generalization. For instance, when we get a new car my wife and I are likely to be apologetic about it when talking with a

cultured European. We save our boasting (not being free of that very human trait) for the retired American bootleggers that are making a quick "round" of Europe on their own yachts. There is no doubt that it is not unfashionable to be thrifty in Europe, whereas among Babbitts such a tendency reflects seriously on one's social position whether one is at home on Park Avenue or State Street in Sioux City.

I daresay that the budget figure of 18 per cent for savings is in practice rather an optimistic goal, which, let us hope, is not inspired by business considerations on the part of the savings banks. My savings, on the contrary, are real, whereas I should probably belong to the "new poor" had I been subject to the hysteria of Wall Street during the past two years. As it was, finding the enthusiasm contagious on my last trip home, I bought a market leader at 68. Fortunately, after two months in Europe, with a chance to analyze the stock in a sane atmosphere, I sold at 66. During the November break this same stock (United Corporation) could be had at 19. And, in fact, I have since bought several stocks at prices that now show me a profit.

I shan't attempt to discuss the cultural advantages of European life, my purpose being merely to point out the financial aspect. However, while all of my family speak French and German as well as English, and we know more about art, rugs, music, and antiques than we otherwise would, every year convinces me that modern European culture is much more shallow than I used to imagine from the gloomy depths of the chicken patty course of the weekly Rotary Club luncheon in Zenith. I often wonder if I wouldn't be happier in giving up the ease and various advantages of Continental life to go back and live where life really sizzles—hot dogs, go-getters, radios, and all. And some day, I suppose, I shall.



Publishers Photo Service

THE CITY OF ATHENS AS SEEN FROM THE ACROPOLIS

CONQUERING THE Foe ... *that turned back a Zeppelin*

A giant Zeppelin not long ago started across the Atlantic. Hardly was it well under way, when, one by one, the drive shafts of four of its five engines cracked and went out of action. The great air ship turned back and landed—just in time, as mechanics soon discovered, for the fifth shaft was almost at the breaking point.

Vibration which turned back this huge Zeppelin is a foe to every modern high speed machine. In the Westinghouse research laboratories at East Pittsburgh vibration has been put on the stand to disclose its own secrets. Its ways have

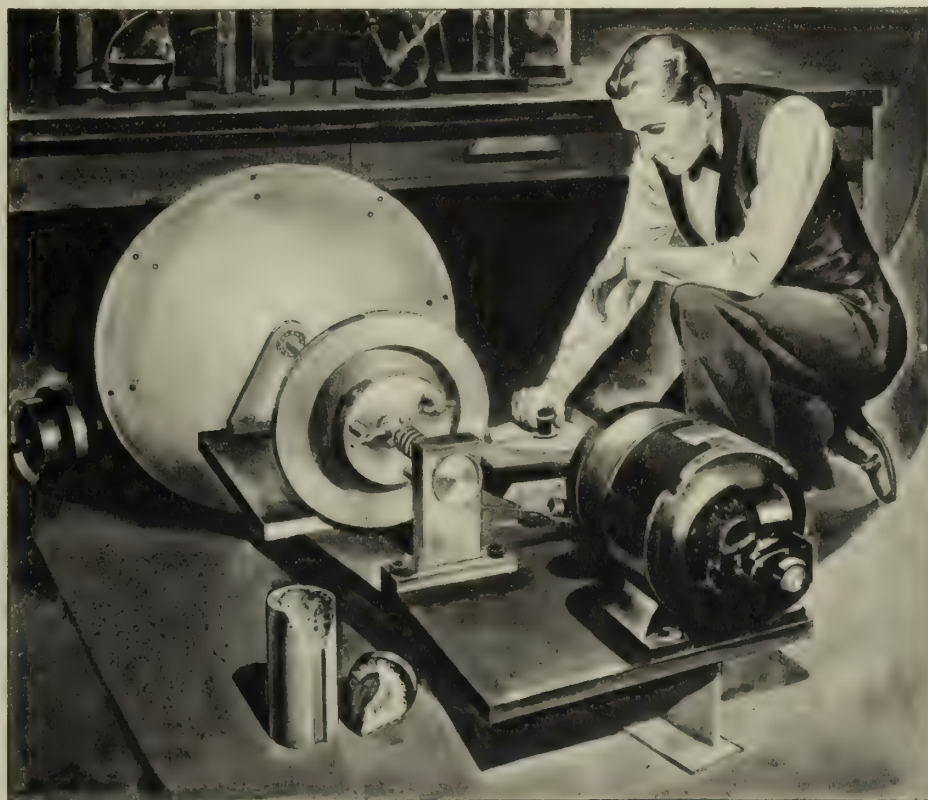


been charted. Its behavior has been reduced to mathematical formulas which engineers can now use in designing machinery to operate at the high speeds

which modern industrial methods demand.

Not only in electrical details of modern machinery, but in mechanical details as well, Westinghouse carries on its work of helping you to have more by making machines capable of doing more.

The results of Westinghouse research serve you in mines and factories, theaters, homes, stores, and offices—wherever the work or recreation of the world is carried on.



ELECTRIC POWER BUILDS BUYING POWER

Westinghouse

Marshall Field, Tom, Dick & Harry

Has become, within a decade, Chicago's important and prosperous Field, Glore & Co.

IT HAS long been the fashion for old-time companies to advertise the number of years they have been in existence. Field, Glore & Co. makes no such boast. Most of the better-known investment houses were already tutoring a third generation in the intricacies of finance when Field, Glore & Co. came into being in Chicago. Last month the house celebrated its tenth birthday. It noted that within those ten years it had been a principal in participations totaling more than two and a half billion dollars.

There were, of course, contributing aids: the fortune of Marshall Field III, grandson of the founder of Chicago's great store and president of Field, Glore & Co.; the genius of vice president Charles Foster Glore, one of the brightest young men in a bright young city; the Coolidge wave of prosperity, carrying many a new enterprise on its high crest; the great vigor of Chicago itself. Emerging from the hard-boiled era of the pioneer industrialists, Chicago found itself moderately sophisticated but immensely rich and immensely energetic. Field, Glore & Co. happened at the right time to harness both money and energy. Most notably, Field, Glore in 1929 produced the Chicago Corporation.

When, in February of last year, the Chicago Corporation was organized, the house made an interesting announcement: the Chicago Corporation was *not* to be a "so-called investment trust." Instead, it explained, it was to be a "financial corporation designed to supplement the existing

facilities of the Middle West." This statement gratified the Board of Trade and the Chamber of Commerce; they were well aware, as were other local boosters, that before the inception of the Corporation, companies seeking capital were forced to go east to New York when Chicago banks, because of the nature of the loans, were unable to assist them. But the statement was of no such vital interest to potential investors, for they were not so much concerned with *where* (geographically) their money was to be loaned out as *who* was to do the lending. What impressed them, then, was the list of those Chicagoans on its directorate—an imposing list and worth setting down herewith: Sewell L. Avery, president of the United States Gypsum Company; B. A. Eckhart, president of his own milling company; George B. Everitt, president of Montgomery Ward & Co., Incorporated; Marshall Field, Stanley Field (uncle); Charles Foster Glore (also the Corporation's president); Donald R. McLennan, president of Marsh & McLennan (insurance) and a financier of unquestioned ability; George A. Ranney, vice president and treasurer of the International Harvester Company; James Simpson, then president, now board chairman, of Marshall Field & Co., Inc.; Silas Hardy Strawn, board chairman of Montgomery Ward, also a senior partner of Chicago's best-known law firm (Winston, Strawn & Shaw); Edward F. Swift, vice president of Swift & Company; F. Edson White, president of Armour and Company; David A. Crawford, president of Pullman, Inc.; and Arthur W. Cutten. A more representative list of Chicagoans could not be compiled at any price.

Stock was sold to the public in units—a share of convertible preferred and a share of common—750,000 shares of each, with 1,000,000 shares of common being purchased by a small group, a majority of whom were directors. From the sale the Corporation received \$59,375,000, mostly Chicago capital. But such a sum is not easy to invest hurriedly, in one or even a hundred concerns. It could have gone to the Chicago call-money market, but at that time on Illinois statute books was a usury law and 6 per cent was maximum, and the wise men of finance had not yet conceived a scheme of getting around the law by establishing a "service charge." Thus the \$60,000,000 traveled to the New York call-money market, where, as everyone remembers, interest rates were reaching stupendous peaks of 9, 10, and on one day, 20 per cent. And, although some of the money was soon brought back to Chicago to relieve an embarrassing credit situation there, most of the \$60,000,000 remained in New York, and thus arose a conflict—the investors on one side, pleased at a step that was bound to make them more money; the Make-

Chicago-First-City townfolk on the other, frankly disappointed at what seemed to them a broken promise.

But such small grumblings lessened not at all the continually mounting enthusiasm for the Chicago Corporation: stock units rose, slowly at first, from 65 in March (it was brought out at 66 the unit) to 73 in June, and then more rapidly until, by the end of July, it was selling for 123½ (still listed in units, for sake of comparison, though the stock was split up during that month). Also, in that month, the Corporation made a significant move when it became one of a group which invested not lightly in the Willys-Overland Co. The seller was John North Willys himself, who held some 800,000 shares of Willys-Overland common. Just before the sale, there were persistent merger rumors; some said with Packard, long aloof from combines; others said with Nash; still others talked of a merger of all three. Chicago Corporation stock remained strong for two months—as long as the rumors continued to persist—and an all-time high of 142 was reached on August third. Split up, this meant a price of 73 for the common and 69 for the preferred. The spread lasted for only one feverish day.

By September Chicago Corporation stock started to ease off, when investors were convinced there would be no mergers. September's low was 100 (common, 46; preferred, 54). October's was of course tragically lower—a combination price of 54 for the two, which was followed by an all-time low in November



Underwood & Underwood
MARSHALL FIELD III



Blank-Stoller
CHARLES F. GLORE



SPEED — the world salutes each victor . . . each conqueror of time

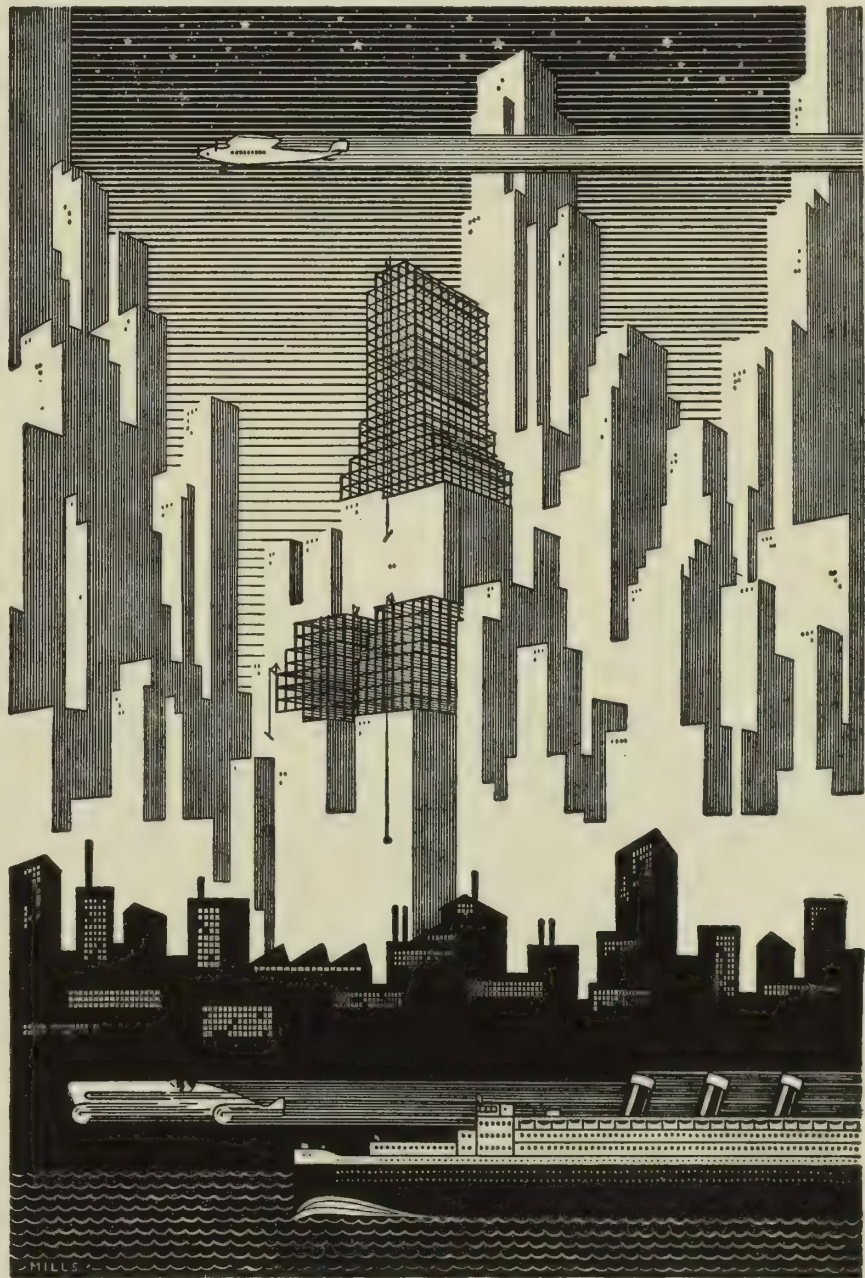
MOUTHS stood agape when headlines told of an ocean liner clipping nearly nine hours from the trans-Atlantic voyage . . . eyes popped when a racing car attained a speed of nearly four miles a minute . . . when a roaring plane hurtled through the air to establish a new mark of 355 miles an hour.

. . . and business executives, too, have commented as Austin, international engineers and builders, created amazing speed records . . . erecting a mammoth six-story manufacturing building in Northern Jersey 23 working days ahead of the guaranteed 90-day completion date . . . in the Midwest, designing and constructing a complete plant of 125,000 square feet for efficient straight line production, in the short span of 60 working days.

Years of research and toil precede the perfected machine that sets a record. In like manner, the Austin organization has progressed by ever seeking out and applying better methods . . . by developing and sponsoring the improvements which provide low cost design and rapid construction of industrial plants and commercial buildings.

Speed, not to the exclusion of all else . . . but speed that permits occupancy of your buildings weeks before you had expected . . . speed that puts you into production on that new article before competition is aware of its existence . . . speed covered by a rigid bonus and penalty clause in the contract if you desire . . . *that is Austin speed!*

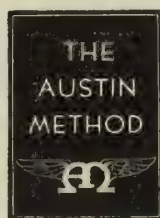
Helpful building data and approximate costs on any project you may be planning will be gladly furnished. Wire, phone or write today.



THE AUSTIN COMPANY

The AUSTIN METHOD of Undivided Responsibility

Design, construction and building equipment . . . separate responsibilities ordinarily . . . become one unified responsibility under The Austin Method. One nation-wide organization handles the complete project under one contract which specifically guarantees in advance, total cost, time of completion with bonus and penalty clause if desired; and quality of materials and workmanship.



ENGINEERS AND BUILDERS . . . CLEVELAND

of 12½ for the common, 35 for the preferred.

Unfortunately, now that the general gloom has somewhat passed and Chicago once more takes a cheerful view of business activity, investors in the Chicago Corporation get little satisfaction from an examination of its annual statement. Few investment trusts reveal at what prices, at what times, and in what amounts they make their commitments. In the annual statement, issued last January, Chicago Corporation declared: "Until the end of October the funds of the Corporation were largely employed in the call-money market, substantial sums being loaned in Chicago. During that time, the Corporation did not buy a general investment list of securities, but, consistent with its stated purpose, made a number of substantial commitments in situations offering favorable opportunities of constructive developments over a period of time." Then followed a discourse on Willys-Overland, which was not specific. What other stocks were purchased before October, the statement did not say. What stocks it owned afterward (as of December 31) were listed with satisfactory completeness. Holdings, as of that date, proved to be valued at \$50,161,958, which figure was some \$9,000,000 less than the value of assets at the time the Corporation was formed.

Even though the Corporation's net 1929 profit of \$4,224,443.75 did not take into account the decline in market value of the securities owned, it may be presumed that it still owns most of those upon which it took a loss. In March stockholders were told that net market value appreciation in the first two months of 1930 totaled \$4,000,000. And the Corporation's position in cash on hand, call loans, and short-term credits, amounting in all to \$18,400,000, is strong. What appeared to be the Corporation's weakest point was, obviously, its still-substantial

holdings in Willys-Overland common—250,000 shares, some of which, however, had been purchased at low prices during the run of the low market.

Thus the Chicago Corporation—a fundamental part of Field, Glore & Co. and, if not its outstanding achievement, certainly its outstanding enterprise. Even so, it was not Field, Glore's only venture in investment trusts. Another was, and still is, the Continental Chicago Corp., about as similar in operation as it is in name, with the noteworthy difference that Field, Glore in this later participation was second, not first, in the syndicate. Chief member of the syndicate is the Continental Illinois Co., and therein is seen the fourth spoke of a wheel of happy business alliances. First of all in these alliances there is the matter of the connection which Charles Glore and Donald R. McLennan had with the formation of the Continental Illinois Bank & Trust ("Largest bank under one roof"), parent of the Continental Illinois Co. Together they were largely responsible for the merger. Next there is the fact that both Mr. Glore and Mr. McLennan are directors of the Chicago Corporation, as above noted, and both are directors of the Continental Illinois. Moreover, the Chicago Corporation and the Continental Chicago Corp. have four other directors in common: White, Swift, Stanley Field, Eckhart. That is the circle—Field, Glore to Chicago Corporation; Chicago Corporation to Continental Illinois Trust; Continental Illinois Trust to Continental Chicago Corp. And back again.

The fourth spoke, Continental Chicago Corp., is presided over by Arthur Reynolds, which adds strength to the wheel, as he is the Brother Reynolds who is chairman of the board of Continental Illinois Bank & Trust Co. The Corporation has outstanding 1,750,000 shares of

common, 1,000,000 of them owned by the Continental Illinois Co. Organized September 11, 1929, it had hardly the time to make investments before the stock market disaster came. This was, perhaps, a fortunate fact, inasmuch as a satisfying amount (\$26,610,448.99) of its total capitalization (\$64,101,759) was still in the comparatively safe forms of cash, call loans, short-term notes at the end of the year. Its stock depreciation was \$4,900,000—less than half that of the Chicago Corporation. Its earnings were \$693,259.07 (again not taking into account decline in market value of securities)—also less, because of the shorter time it has been in operation.

Then there is still a third, somewhat parallel Field, Glore enterprise—Chicago Investors' Corp.—which is frankly more of an out-and-out investment trust than either of the other two, and could not so easily be included in the wheel. It was formed some two years ago as a private business with about twenty or thirty Chicago financiers owning all its stock. It became public property on August 27 last year, when 150,000 shares of preferred stock were sold publicly. Its story is needless to tell—the story of all like companies whose securities depreciated last October. With a market value of its assets (at the time of public sale) of \$20,071,446, after the retirement of 80,000 shares of preferred stock (capital value, \$4,000,000), market value of assets had decreased to \$10,563,856.87. In making the annual report, however, Chicago Investors, unlike the aforementioned others, *did* adjust its records to show the cost or market value (whichever lower on December 31) of securities. The loss, \$2,937,827.54, was carried to surplus.

It would be unfair to permit judgment of the worth and reputation of Field, Glore on the rise and fall of its investment trusts alone. Many of Field, Glore's activities have been far removed from such concerns. With foreign corporation commitments, it has had a great measure of success. It has floated issues of Italian Superpower to the extent of \$20,000,000; it has participated in issues of \$10,000,000 each in Rhine Ruhr, Este Road, French Mail, "Montecatina" (Montecatina Societa Generale per l'Industria Mineraria ed Agricola), Meridionale Electric; \$30,000,000 in the city of Milan; \$4,000,000 in Hamburg Electric. Its utility participations in Illinois Power & Light alone aggregate \$100,000,000. Among its issues of prime interest to Chicago are those of Marshall Field & Co. bonds (\$17,500,000), Fair Store preferred stock (\$6,000,000). Once it was interested in municipals, but lately has underwritten few such. Small are the profits in bonds of cities and states.

During the first few months of the present year three Field, Glore underwritings and participations have exemplified the ever-increasing scope of the company's activities. First came the underwriting of \$60,000,000 worth of preferred stock and 2,000,000 shares of common stock of the consolidated Republic Iron & Steel Co., which came about through the merger of Central Alloy Steel Corp., Bourne Fuller Co., the Donner Steel Co., and the old Republic Iron & Steel Co. Heading the syndicate, in which Field, Glore is next to top, is Cyrus Stephen Eaton's Otis & Co.

[Continued on page 140]



Hamilton Maxwell, Inc.

ON THE MARSHALL FIELD ESTATE, AT LLOYD'S NECK, L. I., IS THE BEST PHEASANT SHOOTING IN AMERICA

OVER SEAS

When American products go down to the

seas in ships, the question of boxes and crates becomes doubly important. Shipping cases must be strong enough to endure many rough handlings, and designed to overcome other hazards of transport by sea. At the same time they must not be bulkier or heavier than the safety factor demands, because export tariffs are high and import duty is often assessed on gross weight. Where is the happy medium, precisely? . . . General Box Engineers have solved this vexatious question for many customers, the right answer to which is so profitable. They will bring to

your export or domestic shipping problem an abundance of experience and an unbiased point of view. Consult with us about lowering your shipping costs to increase your profits or expand your markets.

•
Among those with whom we have
cooperated—

R. J. REYNOLDS TOBACCO COMPANY
(Camels, Export)

•
NATIONAL BISCUIT COMPANY
(Export)

•
PRO-PHY-LAC-TIC BRUSH COMPANY
(Export)

•
COLUMBIA AXLE COMPANY
(Export)

•
THE MAYTAG COMPANY
(Domestic and Export)

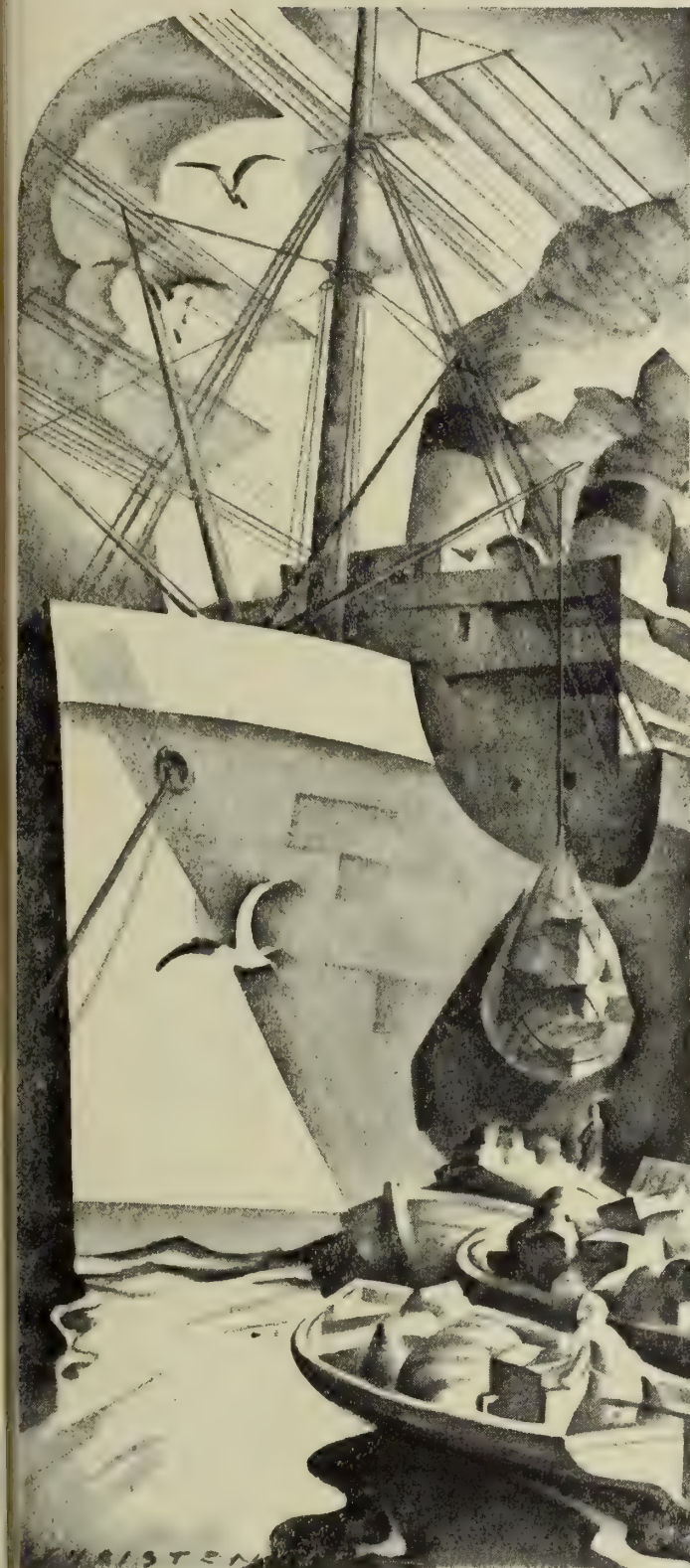
•
WILLIAMS OIL-O-MATIC HEATING CORP.
(Domestic and Export)

•
BURGESS BATTERY COMPANY
(Domestic and Export)

GENERAL BOX COMPANY

44 WEST ILLINOIS STREET • CHICAGO ILLINOIS

*One Service
NationWide*



The Case of William Fox

[Continued from page 49]

Yet certainly the signing of the Loew papers was one of the great scenes—indeed the greatest scene—in the record of Fox progress. The deal, which was concluded with Nicholas Schenk, as Marcus Loew had died shortly before, gave Mr. Fox a one-third interest (433,000) shares in Loew's, Inc., a chain of some 200 theatres, and a first-rank production company in its subsidiary, Metro-Goldwyn-Mayer. Loew's (including Metro-Goldwyn-Mayer) was doing a larger gross business than Fox Film itself, and for the year ending August 31, 1929, showed a net income of \$11,756,900. Confronted by a once-in-a-life-time opportunity to double his business, knowing that three other companies were bidding against him, Mr. Fox was determined to acquire the Loew holding at almost any figure. It is said that he finally paid for it from \$120 to \$125 a share (a price far above the market) with a total expenditure of well over \$50,000,000. But it must be remembered that in 1929 large round figures slipped trippingly from the tongue, that the Loew stock was an excellent investment, and that at the time of its purchase Mr. Fox was generally considered to have done himself a masterly good turn.

He did not, however, stop with his acquisition of 433,000 shares. Eager to establish a controlling interest, he formed a syndicate of family and friends and, acting through several brokers, including Mike Meehan, radio specialist, bought in the open market an additional 227,000 shares. The two blocks together (some 660,000 shares) gave him approximately 50 per cent of outstanding Loew stock and made Loew's, to all practical purpose, a Fox subsidiary. It should be noticed that the Loew stock was bought with the corporation's money but in the name of Mr. Fox's personal syndicate. Such a procedure, however, is hardly unprecedented, especially in one-man shows, and Mr. Fox maintained that if he had bought the extra Loew stock in a corporate name (Theatres) the United States Government would immediately have instituted the antitrust proceedings, which it later began in any event. The 660,000 Loew's shares cost Mr. Fox in the neighborhood of \$70,000,000.

This was a large lump for even the Fox system to digest, but Mr. Fox immediately added the Gaumont deal to it. Gaumont British Pictures Corporation, Ltd. was a British company operating about 300 theatres in the British Isles. So many of the larger British theatres were Gaumont and so great was their reputation that Gaumont houses constituted the key to distribution in the British Isles. Also they were earning about \$3,000,000 a year. So Mr. Fox bought the chain (for \$20,000,000) and thus became a cinema emperor with an international sovereignty.

It was a long way now that the young East Sider had traveled. He controlled some 1,500 theatres and two of the greatest picture producing companies. For Fox Film and for Metro-Goldwyn-Mayer worked such stars as Marion

Davies, Greta Garbo, John Gilbert, Ramon Novarro, John McCormack, Lois Moran. In a ballot taken by *Film News Daily* (cinema trade paper) Fox and Metro-Goldwyn-Mayer pictures secured six places among the year's ten best productions. Mr. Fox was so big that the United States Government was finally suing him as a monopoly and only Warner Brothers (also being sued) could be called his rivals.

But although the summer of 1929 saw the climax of the Fox career, the autumn of 1929 beheld his catastrophe. Indeed (as in all good dramas) the force of disintegration had begun setting in long before the climax itself was arrived at, and throughout 1929 there were unmistakable portents of certain difficulty and possible disaster. In the Loew and the Gaumont purchases Mr. Fox had ventured far beyond the limits of sound financing, and when the great "bull" market of 1929 exploded in a series of reverberations throughout October and November, the Fox companies were first and most prominent among the crash victims.

For when he had been investing some \$90,000,000 in Loew's and in Gaumont, Mr. Fox had been obviously in no position to finance out of earnings. He first resorted to short term notes and, as his credit was considered excellent, New York and London banks were soon well supplied with Fox paper. When bank loans no longer sufficed, he turned first to his banking house and then to his talking-picture associate, and in the spring of 1929 borrowed from Mr. Stuart and Mr. Otterson the money which was later to disrupt their friendship. Without putting up any collateral, he got from Mr. Stuart a \$10,000,000 loan and from Mr. Otterson a \$15,000,000 loan and with the proceeds of the two loans closed the Loew deal for the 433,000 shares already mentioned. The question of why he was able to get so much money without security merges in the larger question of why he was permitted to postpone the permanent financing of his companies until the market collapse made such postponement absolute. If ever companies needed to raise money by issuing new stock, those companies were Fox Film and Fox Theatres, and if there was ever a time when new stock was most readily issued and most greedily absorbed, that time was the pre-panic period of 1929. Looking back upon the spring and summer of 1929, Mr. Fox can see (at least in his mind's eye) a strange and sinister delay on the part of Mr. Stuart; Mr. Stuart can see an irritating and irresponsible delay on the part of Mr. Fox; and the unprejudiced observer, unable to reconcile conflicting stories, can only see that for some reason the stitch that would have saved nine was never taken and the barn door that would have preserved the horse was never locked.

It is true, however, that Fox financing was hindered by circumstances not under the control either of Mr. Fox or of Mr. Stuart (Mr. Otterson, of course, had no immediate responsibility for seeing that Mr. Fox was properly

financed, although he apparently made his loan with the understanding that permanent Fox financing would shortly follow). Both Mr. Fox and Mr. Stuart contemplated a consolidation of Fox holdings prior to the grand stock issue that would retire the \$90,000,000 total of short term indebtednesses, and both thought (very correctly) that the Government might object to any Fox-Loew merger. Thus a good deal of valuable time was wasted early in 1929 in unsuccessful attempts to feel out the Attorney-General's department and see if the consolidation would be permitted.

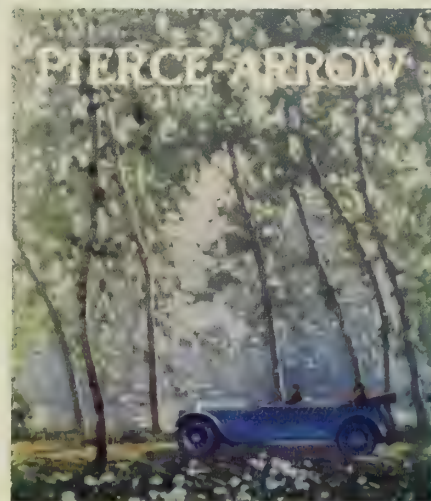
Then, in July of 1929, Mr. Fox, being driven to a Long Island golf course to keep his first golfing engagement with Adolph Zukor, head of Paramount, crossed the path of an inexperienced woman driver who ran into his machine, killed his chauffeur, and put Mr. Fox in a hospital. Here was an entirely unpredictable and terribly unfortunate mishap which rounds out Mr. Fox's interpretation of why his companies were allowed to remain in their temporarily financed state. For (as Mr. Fox tells the story) Mr. Stuart and Mr. Otterson were thoroughly acquainted with every step in his expansion, had urged the additional Loew purchase and the Gaumont purchase, had encouraged him to proceed in the expectation of stock soon to be issued, but had produced no financing plan up to the time of the motor accident, from which Mr. Fox recovered only on the very eve of the market break.

Here, however, the opposing version is so different as to necessitate a separate rebuttal paragraph. Mr. Stuart (and Mr. Otterson) say that their intimate knowledge of Mr. Fox's proceedings ended with the first Loew purchase. They say that he bought the second Loew block without their knowledge and the Gaumont theatres without their approval, and that only after the collapse of the market did they discover the complete extent of his indebtedness. Admitting the unfortunate delay resulting from the auto accident, they do not think that Mr. Fox was as completely disabled for as long a period as he maintains, claiming that before the break in the market they had interested a banking syndicate in Fox financing, but that this syndicate had been discouraged by Mr. Fox's refusal to permit examination of his books. As evidence that Mr. Fox was able and active as early as September, they point to the fact that during this month a ridiculous, blatant, and typically unsophisticated effort was made to sell Fox stocks to Fox theatre patrons via the medium of Movietone sales talks.

It might be thought that even the first Loew transaction, involving well over \$50,000,000, would have been enough to convince Mr. Stuart that an immediate financing arrangement was unqualifiedly essential. But relations between Mr. Fox and Mr. Stuart, especially during the early 1929 period, were marked by unusual demands on the one hand and unusual concessions on the other. Mr. Fox habitually needed



Many Spring seasons and many Pierce-Arrows have passed between the two portraits by Chichester on this page . . . but the season brings back the same fresh beauty to the scene each year, and the car continues to be America's finest motor car.



Pride of Craftsmanship *Builds America's Finest Motor Car*

A LITTLE less than two years ago, a group of earnest men took over the management of Pierce-Arrow. The task was approached with the confidence of long experience—but also with a great reverence for a fine name, a distinguished achievement.

What makes Pierce-Arrow fine is something more than engineering genius, more than excellent materials, more even than its own high ideals. It is the effort of men whose pride is in the work of their hands.

Today, in the great Pierce-Arrow plant, are builders of automobiles who work to standards that their fathers followed—standards of fineness and precision that are regrettably rare in this machine age.

And if that sounds like foolish idealism, Pierce-Arrow is proud of the distinction—and of the approval of men who work to a tradition that forever bars the unworthy.

It isn't a problem in such circumstances to build America's finest motor car. It would be difficult to do otherwise—and, in the presence of its builders, to call it Pierce-Arrow.

THREE NEW GROUPS
132 to 144-inch Wheelbases
\$2695 to \$6250 at Buffalo
(Custom-built Models up to \$10,000)

PIERCE - ARROW

BURLINGAME
PUBLIC
LIB

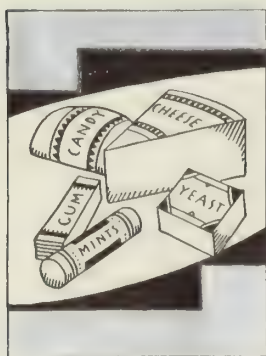
Many Things to Many Men

ASKED the question, "What is Aluminum used for?" . . . different men give widely varying answers.

Everybody is familiar with aluminum cooking utensils. But few realize the strides which have been made during recent years in the art of producing aluminum alloys. Few realize the very many places where aluminum and its alloys are playing vital roles in industry today. To most men, the versatility of this light, strong metal is a surprise.



Manufacturers of both street and railroad cars, buses and commercial trucks use certain strong aluminum alloys rolled into I-beams, channels, and other structural shapes. They use large plates of these light, strong alloys which are riveted to the above aluminum structural forms, with the result that cars, buses and trucks can be built having greatly reduced dead-load and correspondingly increased pay-load, securing both of these advantages without loss of strength or safety.



Rolled in a different manner, sheets of pure aluminum are reduced to foil—some of it so thin that it would take ten sheets to equal the thickness of the paper on which this is printed.

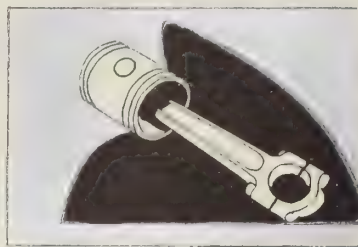
As foil, aluminum is used to seal in the flavor and goodness of chocolates, cheese, yeast, tea, cigarettes, and cigars.

And as foil, but of greater thickness, aluminum protects oil tanks, pipe lines, and tank cars against evaporation losses and corrosion.

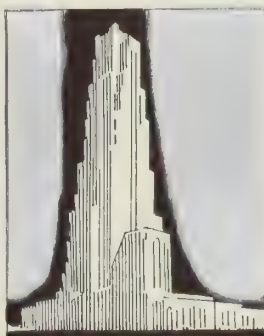
The automobile manufacturer demands that aluminum alloys be cast into pistons and forged into connecting rods. In this form, because they conduct heat 5 times faster than iron or steel, yet weigh less than half as much, they make possible quicker pick-up and higher top speeds.

In much the same manner, aluminum and its alloys have made possible the present-day speedy out-board motor, have cut down inertia in hundreds of places where mass is set in motion, have substituted pay-load for dead-load.

The age we live in demands that we make every pound a useful pound, save handling costs, save freight, save the expenditure of non-



productive energy everywhere—on everything. Lighter machines, provided the strength is there, are cheaper to operate. Light-weight products can be handled more easily and quickly—and at lower cost.



Cornices, spandrels, grilles, window frames, entrance doors—these and many other parts of buildings are made of aluminum. Because it does not rust, it will not stain or streak the sides of light-colored buildings.

Several years ago, it was discovered that pure aluminum could be ground into a fine powder. In this form the architect, builder and painter specify it for use as the pigment portion of aluminum paint.

The tiny flakes of aluminum powder in this paint overlap, forming a coat of metal protection. Resisting corrosion, this coating prevents the formation of rust on metal. Because it checks moisture penetration, it is used as a priming coat on houses, and other wooden buildings.



Few people realize that the caps on jars and glass-packed foods, on medicines and pharmaceuticals of many kinds, are made of aluminum. Usually these aluminum caps and seals are colored and bear printed trade marks or designs.

Perhaps more interesting still, pure, soft aluminum is pressed into collapsible tubes for tooth paste, shaving cream and numerous other pharmaceutical and proprietary products.

Here again, as in the case of caps and seals, it is the purity of aluminum as well as its lightness and strength that dictates its choice.



In the home, aluminum has always held its place as the shining metal of the kitchen, and has long been accepted as the best lining for electric ovens. But today, it has stepped out into other rooms as well. To radio, vacuum cleaner, refrigerator, washing machine, ironer, percolator, waffle mold, it brings one advantage or another.

Outside the house, it appears as shingles, flashing, down spouts and gutters; as casement windows and window screen frames.

Forty years ago, aluminum was a semi-precious metal, selling for approximately \$25 a pound—today it sells for less than 25c a pound.



This great price reduction, and the constantly growing uses of the metal, are due to two things. First, the discovery by Charles Martin Hall of the process which made aluminum possible on a commercial scale. And second, the research and development work which has been carried on by Aluminum Company of America, resulting in the present wide-spread and growing use of aluminum.

Because this Company is the sole producer of aluminum in this country, it has always striven to lower prices in order that the advantages of aluminum might be made available to more and more manufacturers, and through them to more people.

In order to establish the identity of its own brand and to build good-will around its name, Aluminum Company of America has created a trade name. That name is made up of three syllables AL CO A, standing for the beginning letters of the principal words of its name: AL uminum CO mpany of A merica. ALCOA ALUMINUM is the world's highest standard.

If you think that ALCOA Aluminum, or any of its strong alloys might make your product easier to manufacture, or sell, we will gladly discuss the question with you. Write to ALUMINUM COMPANY of AMERICA; 2402 Oliver Bldg., PITTSBURGH, PENNSYLVANIA.



U. & U.
SAMUEL UNTERMYER
HE LOST A GOOD FIGHT



Keystone
WILLIAM FOX
HE MADE A SEPARATE PEACE



U. & U.
CLARENCE DILLON
HE NEARLY SAVED ALL



Acme Newspictures
RICHARD DWIGHT
HE SPOKE FOR TWO



WINFIELD SHEEHAN
HE PICKED THE WINNER



Acme Newspictures
HARRY STUART
THEY FORECLOSED THE MORTGAGE



JOHN OTTERSON

large sums of money at very short notice, and, counting the \$10,000,000 already mentioned, Halsey, Stuart & Co. lent him, on unsecured short term notes, without commission, amounts totaling \$15,750,000. Mr. Fox was undoubtedly a valuable client, and Mr. Stuart no doubt was looking forward to the large commission that would result from the grand financing later to

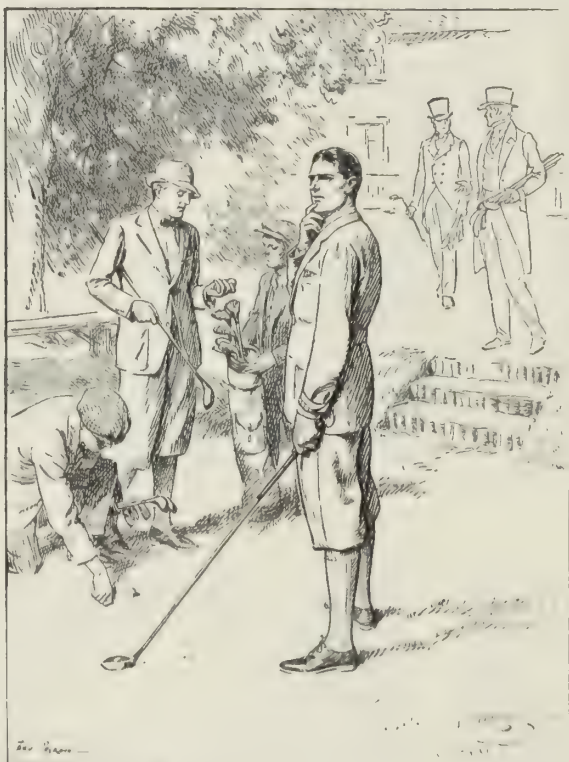
be executed, but the continued postponement of this financing remains difficult to understand.

But postponed it was, and in October of 1929 the market broke, and the postponement became absolute. Down went securities, and down with them went Mr. Fox. His short term notes were coming due in squadrons. The Loew shares bought by the family syndicate had

slumped in the general decline, and brokers were demanding millions more of margin. Mr. Fox needed money so badly that he sold (at what must have been a terrible wrench) his First National holdings to his great Warner Brothers rival, raising by this sacrifice some \$10,000,000. Even then, he was about \$65,000,000 behind. It was during this period that Mr. Sheehan,



Brooks Brothers,
CLOTHING,
Gentlemen's Furnishing Goods,
**MADISON AVENUE COR. FORTY-FOURTH STREET
NEW YORK**



© BROOKS BROTHERS

1818 AND TO-DAY

Spring Clothes for
Sport
and General
Country
Wear

*Send for "A Wardrobe for
GOLF"*

BRANCH STORES
BOSTON
NEWBURY CORNER OF BERKELEY STREET
NEWPORT PALM BEACH

over in Europe, heard the rumors that were soon to bring him home so hurriedly. Finally, toward the end of November, Mr. Fox called to his assistance Mr. Stuart and Mr. Otterson. And the upshot of their intervention was the agreement which Mr. Sheehan arrived just in time to find Mr. Fox so pleased at having made.

It was certainly a one-sided agreement, and how Mr. Fox ever congratulated himself upon it is one of the many mysteries of the case. For when he had written "William Fox" on the line reserved for his signature, he had signed over the control of his company by agreeing to deposit with three Trustees (Mr. Stuart, Mr. Otterson, Mr. Fox) his 50,101 shares of Film Class B voting stock and his 100,000 shares of Theatres Class B voting stock. The Trustees were authorized to receive the resignations of Film and Theatres directors, and even to change the duties of the president (Mr. Fox) by removing financial affairs from his jurisdiction. The Trustees in turn agreed to see what they could do toward helping the companies out of their immediate predicament and also toward arranging a permanent financing plan. Provisions in connection with this proposed plan stipulated that the Trustees might, if necessary, eliminate the exclusive voting power of the Class B stocks and might also continue to hold the deposited stock for a five-year period. Acquiescence of Mr. Fox to these very sweeping provisions can be explained only by remembering that he was in a most embarrassing position and by his apparent assumption that he and his fellow Trustees would invariably agree on all matters. Seemingly he imagined that his abdication would not interfere with his reign.

At any rate, on the same day that the agreement was signed, he deposited his voting stock with the Bankers Trust Co., and in a few days the Trustees had succeeded in persuading his creditors to wait for their money and in raising enough cash to cover the margin on the syndicated Loew stock.

On December ninth (the agreement had been signed on December third) Mr. Fox went home, ill, and returned on the fourteenth completely antagonistic to his fellow Trustees and flatly repudiating his agreement with them. He claimed that they themselves had broken the terms of the document, although (as will be seen below) on this point he had no very convincing arguments, since the Trustee

provisions had been so sweeping as to cover every conceivable conduct. The Trustees had, however, shown that they did not consider themselves bound to proceed in accordance with the wishes of Mr. Fox. They had, for example, requested the resignation of Mr. Jack Leo, Film director and brother-in-law of Mr. Fox. The terms of the agreement unquestionably permitted this request (although, as a peace gesture, Mr. Stuart and Mr. Otterson later withdrew it), but it was something of which Mr. Fox did not approve. And it required only one difference of opinion to make Mr. Fox tardily but vividly conscious of his minority position on the Trustee board. He therefore wrote to the Bankers Trust, asked to have his shares returned (they were not), and for some weeks maintained that he had been victimized by Wall Street, that every financial man's hand was raised against him, and that the telephone company and the bankers were trying to rob him of his great enterprise.

To add to his difficulties, Mr. Sheehan, apparently shocked at his reversal of opinion, went over to the Stuart-Otterson side of the argument and took with him a group of Film operating executives. By this time the controversy had become public, and minority stockholders began instituting receivership suits while various creditors were securing judgments. Meanwhile Mr. Stuart and Mr. Otterson clung to their strategic position as the majority of the Trustee board (a position made stronger by the fact that they were also the largest Fox creditors), and the difficult position of Mr. Fox became daily more hazardous. It looked very much as if the cinema Napoleon was well on his way to Elba.

In January of the present year, however, the entire situation was radically altered by a new and (from Mr. Fox's standpoint) a saving factor. That factor was money. For, after shopping through the financial district (hostile as it had appeared), Mr. Fox discovered a new banking connection and in it a new source of funds. Called, for the sake of brevity, the Blair Syndicate, the new Fox bankers included Bancamerica-Blair; Dillon, Read; and Lehman Brothers. Here was certainly potent support. Bancamerica-Blair enlisted Elisha Walker and the resources of the Blair and Giannini interests. Dillon, Read added Clarence Dillon, who once (in connection with the Dodge Brothers purchase) wrote a check

"The BANKER scrutinizes Advertising Policies and Results..."

says ARTHUR W. LOASBY

formerly Chairman of the Board of the Equitable Trust Company of New York



ARTHUR W. LOASBY

"... with a keener eye and a greater understanding. A few years ago he might have been skeptical. Today he looks at advertising appropriations as he looks at fuel bills and labor costs"

MR. LOASBY makes a penetrating comment on the new conception of industry when he puts advertising in the same category with production.

He is one of the leaders who realize that the factory is no longer a problem complete in itself.

The manufacturer's responsibility, according to the modern view, is not complete until the product has reached the hands of the ultimate consumer.

Much has been done to perfect the processes by which goods are fabricated, but this very perfection has created such a quantity of goods, and in such diversity, that the distributing system has been called upon to carry an increasing burden.

Alert business men are seeking to lighten this burden.

They demand the same efficient handling of products between factory and consumer as is found within the factory itself. To straight-line production they would add straight-line distribution. The two processes must be integrated.

Such integration can be achieved only when there is an active demand in the ultimate market. The study of this demand and the economical maintenance of it against the encroachments of competition are the contributions of good advertising service to this increasingly important phase of industrial activity.

Working with modern business executives, the J. Walter Thompson Company has for many years aided in the solution of the complex problems of more efficient distribution.

Through extensive surveys and wide merchandising experience, it has made the advertising prepared for its clients an essential part of the economic process.

Two interesting folders, entitled "Selling at Home" and "Selling Abroad," have been prepared to show the scope of the service of the J. Walter Thompson Company.

These folders will be sent to executives interested. Write to the New York Office and copies will be mailed promptly.



Giant building of the Equitable Trust Company, photographed from the base of the George Washington statue on the steps of the Sub-Treasury Building in New York. These great structures play their part in changing markets. There are over three and one-half million clerical workers in this country, most of them concentrated within urban areas. Market strategy developed by the J. Walter Thompson Company proves its value in the cultivation of such valuable markets.

The suburb and the standardized home present another phase of the modern problem of distribution. Study of their requirements and their place in the market as a whole has enabled the J. Walter Thompson Company to prepare advertising which has earned a place as an essential and reliable factor in the distribution of commodities.



J. Walter Thompson Company

New York • Graybar Building • 420 Lexington Avenue

CHICAGO, BOSTON, CINCINNATI, SAN FRANCISCO • MONTREAL, CANADA • LONDON, PARIS, MADRID, BERLIN, STOCKHOLM, COPENHAGEN, ANTWERP, WARSAW • ALEXANDRIA, EGYPT; PORT ELIZABETH, SOUTH AFRICA • BUENOS AIRES, ARGENTINA; SAO PAULO, BRAZIL • BOMBAY, INDIA • SYDNEY, AUSTRALIA.



T HOROUGHLY ENJOYED TRIP ... SATISFIED WITH EVERYTHING // ... *

THE American executive is a keen judge of values. So, when he comes across with a blanket endorsement like the above, it can be imagined that the trip in question must have been A-No.-1 in quality.

We do everything in our power to make these executive trips to Europe satisfactory. Quiet rooms are available for conference; trained stenographers are on hand to take dictation; the ship's radio service keeps business men in touch with market conditions, and with their associates at home.

I. M. M. Lines offer several sailings each week to principal British and north European ports, and Friday and Saturday sailings on the speedier ships will get executives to Europe in time to attend important meetings held in London and Paris the following weekend.

Sail on the *Majestic*, world's largest ship; the popular *Olympic*. If time is less pressing, sail on the *Homeric*, *Belgenland*, *Minnewaska*, *Minnetonka*, the superb new *M. V. Britannic*, world's largest Cabin ship, or any one of a number of other *White Star*, *Red Star* or *Atlantic Transport Liners*.

* Quoted from an executive's letter to us.

30 Principal Offices in the United States and Canada. Main Office, No. 1 Broadway, New York City. Authorized Agents everywhere.



**WHITE STAR LINE
RED STAR LINE
ATLANTIC TRANSPORT LINE**
International Mercantile Marine Company

for \$146,000,000. Lehman Brothers brought in Philip Lehman, whose house last year floated a \$100,000,000 investment trust. Working day and night on the Fox debts and their refunding, putting fifty accountants from Price, Waterhouse & Co. on the Fox books, the Blair Syndicate speedily produced a plan whereby, through the issuance of debentures and additional stock the Fox companies could raise \$65,000,000 (minus banking commissions) and pay their debts. For the moment it seemed that Mr. Fox had only to appear before Federal Judge Frank Coleman (hearing the receivership suits), explain that he would now be well supplied with money to pay all his creditors (including Mr. Stuart and Mr. Otterson), and, having secured the dismissal of the receivership actions, resume control of his companies. It looked like one of those favorite cinema situations in which the soldiers arrive just in time to save the settlers from the Indians.

But the salvation proved not so simple. In stepped Mr. Stuart and Mr. Otterson, brandishing the December third agreement, pointing out that no new financing plan could be adopted without the Trustees' consent and that the proxy for the voting stock was still at the Trustees' disposal. Halsey, Stuart & Co. also prepared an alternative financing plan and from this point the emphasis in the Fox case shifted from the question of how Mr. Fox was going to pay his creditors to the question of who was going to do his financing and to direct his companies. And as the accent changed from points of finance to points of law, the situation developed into one of the most bitter and tangled litigations in corporate history.

With lawyers beginning to take so prominent a part in Fox affairs, it is advisable to interrupt the narrative progress with a roll call of the large and varied assortment of attorneys involved in the more litigated aspects of the case. There were, broadly speaking, three groups of principals, headed respectively by Mr. Fox, by Messrs. Stuart and Otterson, and by various minority stockholders in whose names receivership and other suits were advanced. Legal representatives of these groups arranged themselves as follows:

Field marshal of the Fox forces was Samuel Untermyer. As counsel for the Pujo Committee investigating the so-called "Money Trust" in 1913, Mr. Untermyer is said to have been the only lawyer who ever cross-examined J. P. Morgan

and George F. Baker. Mr. Untermyer is such a good trial lawyer that other lawyers have a tendency to question his fundamental grasp of law, but he unquestionably ranks very high among court-room pleaders and previous to his Fox connection had successfully argued the case for a five cent fare on New York subways. Personal attorney for Mr. Fox has been Benjamin Reass (who once secured a divorce for Mr. Fox's daughter), and attorney for Fox Film has been tall, thin, white-haired Robert O. Levys, Republican political leader, who was counsel for Mrs. Florence Knapp, New York State census-taker convicted of misappropriating public funds. Not connected with Mr. Fox, but active in the more recent proceedings, has been the firm of Cravath, De Gersdorff, Swaine & Wood, representing the Blair Syndicate. Most active partner in this firm has been Robert T. Swaine, a prize scholar (for three years head of his Harvard Law School class) who became eminently successful and who, in his early forties, is considered one of the most brilliant of Manhattan's corporate-legal minds.

Mr. Stuart and Mr. Otterson, in their capacity as Fox Trustees, have been represented by Hughes, Schurman & Dwight, a firm whose senior partner is of course Charles Evans Hughes, now Chief Justice of the United States Supreme Court. It was Mr. Fox who, prior to the Trustee agreement, first employed the Hughes firm, and as his own counsel. When the agreement was signed, Mr. Fox suggested that Hughes, Schurman & Dwight represent the Trustees, apparently with the idea that he was thereby securing Mr. Hughes to watch over his interests. Unfortunately, however, Mr. Hughes' connection with the case terminated with his appointment to his present position. Furthermore, when Mr. Fox fell out with his fellow Trustees, Hughes, Schurman & Dwight remained with them, so that Mr. Fox not only lost his great legal friend, but had also got into a position in which the Hughes firm became his chief legal opponents. The active Hughes, Schurman & Dwight partner has been Mr. Richard E. Dwight, large, good-looking Princetonian (former president of the Princeton Club), much irritated by some of Mr. Fox's more personal reflections upon his clients' conduct. Meanwhile Halsey, Stuart & Co. has been represented by Morton C. Bogue of Beekman, Bogue & Clark, and Electrical Research Products by George C. Pratt, general coun-

UTILITY

**A PUBLIC COMPANY WELCOMES
THE JONESES**

WHEN the Joneses moved to Longville they didn't know a soul. Everything was strange. Different milk. Different water. Different-colored trolley cars, different stores, different neighbors. • But three days after the meter was connected they got a letter from the Longville Electric Company that made them feel at home. It was an honest letter that said, "We're glad to have you with us," and meant it. It came straight from the Office of the President. It was personally signed and typewritten on a paper that left no room for doubt—a strong, crisp sheet of Coupon Bond. • The Joneses will always have a warm spot in their hearts for the company that sells them light. • In this day, the progressive public utility corporation values the good-will of its patrons above every other asset. And the executive letter, mailed at intervals not only to new customers but to old ones, and to the company's stockholders, is proving an effective instrument in building and holding their staunch support. • As in scores of other businesses, the paper most often chosen as a background for these important messages is Coupon Bond—dignified, authentic—a paper of quality beyond dispute, made 100% of new, white rags. • We shall be glad to send you, on request, our portfolio, "The Modern Trend in Letterheads," and a new booklet, "The Executive Letter." (In writing for them please use your business stationery.) • *Coupon Bond is but one paper in the Eagle-A Line of Bonds, Ledgers, Writings, Index Bristols, Offsets, Covers, Book Papers, Mimeograph and Manifold Papers—the right paper for every business purpose.*

AMERICAN WRITING PAPER COMPANY, INCORPORATED
HOLYOKE, MASSACHUSETTS



EAGLE·A·PAPERS



The advantage of a business letter paper of character is that it speaks a good word for your business in quarters you never heard of and to people you do not know.

Crane's Bond is a 100% new white rag paper. Its crisp, distinctive sturdiness builds sound prestige and good will for you with every letter you send out. In view of this, doesn't a very slight extra cost seem pretty unimportant?

CRANE'S BOND

for letterheads and envelopes

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sel, and the firm of Green & Hurd. A less corporate addition to the anti-Fox legal staff has been Mr. Nathan Burkan, counsel for Mr. Sheehan. Mr. Burkan has been noted for his theatrical practice, and on the walls of his office are many autographed photographs from many grateful actresses. During the Fox litigation Mr. Burkan was also busy in criminal court, being counsel for Mae West in the *Pleasure Man* case (the first trial of which resulted in a hung jury).

Prominent among the stockholders' lawyers have been Mr. Martin Conboy and Mr. Arthur Berenson, trial counsel of the fiery type. Mr. Berenson has become especially well known as a frequent representative of minority stockholders in many corporate litigations, and in a suit against the New Haven railroad is said to have extracted a fee of \$800,000. He is an eloquent exponent of the rights of the small stockholders and is thoroughly disliked in financial circles.

With so many lawyers (and the list just given includes only the more active) representing so many interests, progress in the Fox litigation was extremely slow. Outstanding developments were the failure of Mr. Fox to get back his voting stock, and the success of Mr. Fox in getting his stockholders to approve the Blair financing plan.

. . .

In arguing (before Judge Aaron Levy of the New York State Supreme Court) for the release of his Class B shares from the Trusteeship, Mr. Fox alleged general trickery and fraud on the part of his Trustee associates, but was not convincing in his specific allegations of how they had violated their agreement. Indeed, he spoke chiefly of certain verbal agreements, admittedly not incorporated in the signed document, but allegedly side understandings between the principals. He maintained that one such side agreement exempted Mr. Leo from the provision that the Trustees could request the resignation of any director, and that another stipulated that Mr. Otterson should withdraw from the Trusteeship as soon as his \$15,000,000 was paid him. Mr. Fox also claimed that he had signed the agreement hurriedly and without fully understanding it. Mr. Stuart and Mr. Otterson denied the existence of any side agreements and rested their case on the main document, of which any violation on their part was certainly difficult to show. So Judge Levy

returned an opinion against Mr. Fox, calling his repudiation of the agreement "flagrant and unwarranted" and adding that "this very Fox chopped down this healthy, thriving tree [i. e., the Fox companies] with his own hatchet."

The Fox attorneys took an appeal from this opinion and also instituted (this time in Federal Court) another suit (based on different grounds), asking the return of the deposited stock. Thereupon the anti-Fox forces maintained that the same case was being started all over again and got Federal Judge Manton to issue a writ of prohibition to keep the case from being heard in the Federal Court. It was the first time in twenty-five years that such a writ had been issued, but Hughes, Schurman & Dwight were angry over the allegations of fraud in the first Fox suit. Thus the Fox forces were unable, for the time being, to make headway in their attack upon the Trustee agreement.

The center of interest in the argument of Fox financing lay in a general meeting of Fox stockholders called (on March fifth) to approve the Blair plan of financing. This was a hectic and prolonged meeting, with Mr. Untermeyer disputing amiably with Mr. Conboy, and Mr. Fox disputing bitterly with Mr. Berenson. Mr. Berenson, as an advocate of a receivership, occupied an extremely awkward position, and his remarks were frequently greeted with boos and hisses. At one point Mr. Fox thought it might be necessary to call an ambulance and take Mr. Berenson away, and when Mr. Berenson said that Mr. Fox had better not try to put him in any ambulance, Mr. Fox said that Mr. Berenson would instinctively chase an ambulance as soon as he heard its bell ring. Another dispute arose over the voting of the deposited Class B stock. Mr. Dwight voted it against the Blair plan, acting in the name of the majority Trustees, then asked Mr. Fox if he wished to join them in their ballot. Mr. Fox replied that he had already voted his Class B stock (of course for the Blair plan) and that he could not vote twice, whereupon Mr. Untermeyer injected a pleasantry to the effect that perhaps plural voting was common in Mr. Dwight's circle. The disputed stock was finally counted for the Blair plan, Mr. Fox being the *holder of record*, but as it happened Mr. Fox did not need his stock to secure stockholders' approval, as some 96 per cent of all votes cast were for the Blair financing. Main signifi-



For centuries a favorite in history and fable, Richard The Lion Heart typifies the rugged character of Lyon products. Steel served Richard well, just as today it does able duty for modern business crusaders.



Helmet of Richard. Painted by Ludwig Gassner

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A NAME like a star, a name like light . . . brilliance, gayety, sophistication, the elegance of the *ancien régime*, the chic of the moment's mode, the artistry that turns a market-place into a pageant, a bit of silk into a creation, food into something fit for gods, a smile and a shrug into a whole philosophy of life . . . France! Every French Line ship is France herself, complete to the smallest detail, and manned by Breton seamen whose ancestors tamed the Atlantic before Columbus . . . passengers become part of its scintillant background . . . sparkling, vital, dancing its vivid way between the three great world capitals on board the "Ile de France," "Paris," or "France."

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From the heart of Manhattan across "the longest gangplank in the world," a waiting express for London, a few hours later the covered pier at Havre, three-hour express to Paris . . . Cabin liners, the "Lafayette," the "De Grasse" and the "Rochambeau," slightly slower, equally gay, make economy smart.



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cance of the meeting lay in its convincing demonstration that Mr. Fox was supported by an overwhelming majority of his stockholders.

But although Mr. Fox's stockholders favored the Blair plan, Mr. Fox was still plagued by his unfortunate agreement of December third. The annual stockholders' meeting on April fifteenth appeared the probable scene of the next major battle. Unless some way was found to keep Mr. Stuart and Mr. Otterson from voting the deposited stock in their capacity as Trustee majority, it seemed that they might well employ the voting shares to elect new directors, appoint new executives, and install the Halsey, Stuart financing plan. It was true that Mr. Fox's lawyers were now disputing the legality of the Trustee agreement on new grounds. They claimed that the only consideration given Mr. Fox in return for his stock was a promise to help him, and that a pledge was not a consideration on which an irrevocable proxy could be based. In spite of this loophole, however, Mr. Fox apparently thought that his position was untenable; at any rate he cut short further litigation by selling out to General Theatres Equipment, Inc. and retiring from the field. Thus his great enterprise did finally slip out of his hands.

With the transfer of the Fox voting stock from Mr. Fox to General Theatres Equipment, Inc., Mr.

Fox resigned the presidency of his companies and was succeeded by Mr. Harley L. Clarke, president of General Theatres Equipment, president also of Utilities Power & Light Corporation, which operates many electric and gas utilities in the Middle West. It was Utilities Power & Light which last year invaded the British Utility field by securing control of the Greater London and Counties Trust, Ltd., which supplies light and power to many English cities, including Birmingham and London. General Theatres Equipment was formed last July, in a merger of several equipment companies, and is best known in connection with its development of Grandeur films—the oversized, "three-dimensional" pictures recently introduced at Mr. Fox's Roxy Theatre. In addition to his activities in connection with public utilities and cinema projection, Mr. Clarke believes that "familiarity with the works of Shakespeare is the basis of a fair education," and is the backer of the Chicago Civic Shakespeare Society through which Fritz Leiber presents a Shakespeare repertoire. Mr. Clarke issued a statement announcing that there would be comparatively few changes in the Fox companies personnel; Mr. Sheehan said that the war was over and everyone was back in the amusement business again. It was thought that Mr. Fox would take a vacation in Europe or in South America.

Wine

[Continued from page 54]

warned that the men would get drunk, brawl, and smash things, the House of Calvet in its ancient wisdom gave the soldiers a twice daily ration of light beverage wine. M. René Calvet, who in his father's absence gave the hospitable order as a matter of course, says that there was no brawling or smashing, though he recalls an American general later conducted through the Calvet *caves* who showed magnificent form after putting twenty-five different kinds of wine, some green and much old, under his Sam Brown.

"Funny enough!" says René, who speaks almost perfect English. "Funny enough the peasants do not care so much about the wine once it is bottled. Before that, yes. They love the vines. They will work and sing all night over the juice at vintage time, as it hisses and ferments. When it is first in cask, they like to

watch and tend and drink some of it, but pretty soon—finished! The vines they love are beginning to bear again, and their interest turns to the new crop. Funny enough!"

It is at this point that the great shippers feel their mission begins. They can buy most wines by the hogshead, and they like to buy them so, nursing them in their own cellars, blending some with others, and finally bringing up in bottle, almost as one brings up a child, a wine which they feel is theirs: "Calvet Wine." Quite frankly a Calvet will tell you that he feels much less interest in a Lafite or an Yquem bottled at the château, sealed, stamped, boxed, and practically reduced to merchandise, than he feels in "one of our own wines," though the House of Calvet is the largest shipper of Yquem.

These fine distinctions and fine

HE'S GONE

**.. but see what he
left behind him!**

Fire has come and gone. You settle down and take stock. You check your burned property against your fire insurance. Fine. That's all taken care of—if you've been prudent. But let's go on . . .

Check off eight months or a year of stopped business income; the loss of unfilled orders — loss of profits, loss of sales. What will you check *these* against? Your pocket-book? Then check some more. Check fixed expenses, salaries of

executives and key employees you cannot afford to lose. Check taxes, interest on bank obligations, mortgage payments . . .

What a paralyzing array of ruinous after effects follows Fire's footsteps! And all so unnecessary . . .

Through the Hartford your fire insurance can be extended beyond the mere replacement of your property. It can be made to provide *income* you would otherwise lose or the rent you would have to pay while your property is being replaced. This is one of the most vital needs of modern business . . . insurance that goes *all* the way to protect both property and the income it produces.

You'll find the Hartford agent thoroughly competent to go over your particular situation and give you this new *individualized insurance* that is necessary for real protection. And he is a man backed by a soundly managed stock insurance company, financially able to meet any drain put upon it. Call the Hartford agent now*—and make your business *safe*.



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“I can afford to be polite”
... said Jim Corbett

“I’ve got the Punch to back it up”

They were passing through the corridors of a downtown club. A well-known manufacturer and his friend, Jim Corbett.

Wham!—Someone bumped into Corbett, almost knocking the “Ex-King of Fisticuffs” breathless.

Corbett bowed with Chesterfieldian grace and smilingly excused the clumsy offender.

“Jim,” exclaimed the astounded manufacturer, “you’re the politest man I ever knew.”

“I can afford to be,” was Corbett’s good-humored reply, “I’ve got the punch to back it up.”

• • •

That very afternoon, in his offices, the manufacturer overheard a clerk make a surly retort to an important caller. And Jim Corbett’s remark came back to him with new and pointed significance.

“I wonder,” he thought, “if we have to use

rudeness here as a sort of protective shell for our weaknesses. Surely this business is big enough to be able to afford courtesy. ‘We’ve got the punch to back it up!’”

Quietly, he started an investigation on the manners of his organization. He eavesdropped on every department. He questioned outsiders. He disguised his voice and ‘phoned in to his own office, listening hopefully for “the voice with the smile.” He dug

THE EMANCIPATION OF THE AMERICAN BUSINESS MAN

into correspondence files to see whether all inquiries were handled with graciousness and care.

But the revelations were far from reassuring. The whole organization seemed to be suffering from sore-thumb or toothache. The air was tense with fretfulness. Nerves were touchy . . . dispositions overwrought.

And it didn't take him long to find out why. The girl at the information desk, for in-



stance, had been working overtime for weeks, helping the bookkeeping department on belated work. The telephone girls were doing odd jobs for other overcrowded departments. The office manager, ordinarily an affable personality, was becoming an irascible driver. Everywhere he found a surly, distraught morale. With both clerks and superiors chafing under the irk of overtime and office confusion.

The investigation pinned the trouble right down to where it belonged—to antiquated, cumbersome and inadequate business methods for handling the day's office routine.

It may seem a far cry from the problem of increasing a corporation's good will to the problem of handling office operations in a smooth, automatic and orderly manner. But the two problems are dovetailed and inseparable.

Good will is dependent on genial and gracious service and contact. But courtesy cannot thrive in a hectic and disordered atmosphere where overstrained nerves and worried minds are the rule.

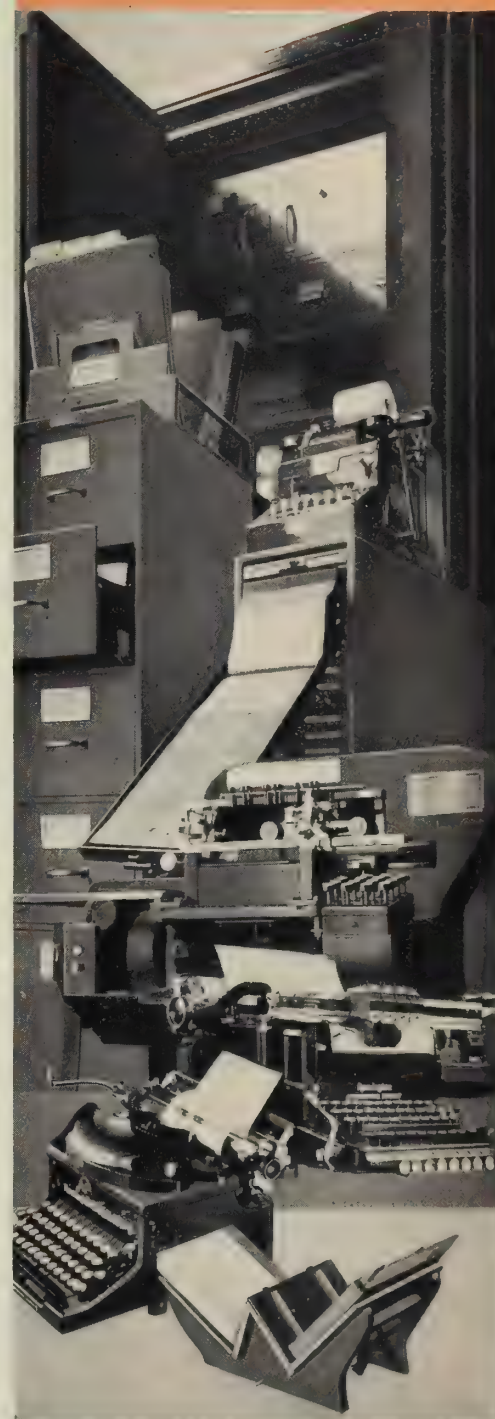
The task of securing modern methods and machinery to take the friction out of office operation, speed up the day's routine and abolish overtime, is today a comparatively simple task.

For no longer need a business man consult a number of sources and listen, in confusion, to the conflicting arguments of various "special pleaders" for different devices. Today there is one headquarters, one central source for the finest of business machines, devices and methods, which he can turn to for a complete and harmonized system of business control.

That headquarters is Remington Rand. With a coast-to-coast network of 4,000 Remington Rand business analysts at the disposal of business men everywhere, it is only necessary to go to your telephone and call the nearest Remington Rand office to have one of these impartial and qualified counsellors of business control in your office tomorrow morning.

Or, if you prefer, write to Remington Rand headquarters direct, stating the particular phase of business operation of most immediate interest to you. That will bring a man with special experience on your particular problem. A conference with Remington Rand on any phase of your office or business problems. It is merely a costless way of making sure you are right or of discovering just where you are wrong, if at all.

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Symbol of Enduring

Love . . .

An eloquent expression of the love and reverence of the bereaved heart—such is the beautiful and lasting Solid Copper De Luxe Clark Grave Vault.

In beauty and dignity, it is in keeping with the finest of funeral appointments . . . a fitting protection for the costliest casket. The soft velvety mat finish of the solid copper is enriched by a polished etched floral design around the entire top.

But the first thought in choosing the Solid Copper Clark is, of course, its positive and permanent protection . . . on which Clark recognized leadership has been built.

An immutable law of Nature seals it against

the entrance of water. No mere man-made seals could possibly give the complete protection from water which the Clark always gives its precious contents.

Made of solid copper, 10 gauge in thickness, with sides and top in one inseparable piece, without welds along the side, and weighing more than 600 pounds, it is indeed a vault for the ages, carrying a guarantee unlimited by time. The Clark Grave Vault Company, Columbus, Ohio. Western office, Kansas City.

CLARK



GRAVE VAULT

This trade-mark is on every genuine Clark Grave Vault. It is a means of identifying the vault instantly. Unless you see this mark, the vault is not a Clark.

Less than Clark complete protection is no protection at all



sentiments of the great wine houses are of course the reverse of an ugly coin. On the other side is the ruthless, conscienceless shipper who doctors, adulterates, and falsifies his wine. To protect the public from such, it is necessary that the House of Calvet should sell the very finest wines as mere package goods. Perhaps a bottle has "gone off" a little, but could easily be restored to perfect health by proper care. Nailed up in the box the wine must take care of itself. You are "protected," but all the same you lose, or you may. Both you and the House of Calvet are paralyzed in the steel grip of Justice, good but blind.

"Ford" wines

It is for this reason that we shall not ignore the "monopoles," wines blended to a standard quality, cared for, and sold under trademark by some house. An example is the Calvet wine trade-marked "Tauzia," *not*, be it noted, "Château Tauzia"; for although, as we have seen, Château Tauzia is the Calvet's own home, it has no vineyards, and neither family honor nor sound French law permits a monopoly to be dubbed "château." What is Tauzia? The Calvets can give you anything they choose, produced in any year, blended or straight, under that label. As a matter of fact the current Tauzia is a blend of Sauternes, but if there should be an undue scarcity of these, the experienced business men and blenders of the House will contrive to give you the same taste with another blend.

Naturally the connoisseur is not enthusiastic about such a "Ford" wine. He would rather know that every vintage of Haut-Brion, for example, is different, and these differences are his delight. There is a certain refinement of vanity in knowing that you know enough to know that a certain wine of a certain year is positively bad. But all champagnes are monopoles, and perhaps you are glad that every bottle of Mumm's Cordon Rouge is blended so as to taste practically like every other. If you like "Ford" champagne, you may be glad to find in a dining car or a Yugoslav hotel some "Ford" Sauterne, for certainly in these trying circumstances the package of Yquem is too much of a gamble. The arm of Big Business, the arm of the great shippers, is long, and they will generally contrive to set their monopoles before you in prime condition, fresh from their cellars. Indeed the name of J. Calvet, Louis Eschenauer, or N. Johnson & Fils anywhere upon a bottle is at least as

reassuring as Packard, Lincoln, or Cadillac on a radiator.

The town of Cadillac, from which came the Sieur de Cadillac, whose arms General Motors use as their "Tauzia," is shown on our wine map and is famous for nothing whatsoever.

Democratic Burgundy

Claret is red Bordeaux. Sauterne is Sauterne. Chablis is white Burgundy. Burgundy is red Burgundy.

To the stupid and never ending argument about whether Bordeaux wines are better than Burgundies or vice versa, Louis XV gave a *coup de grâce* as final as it was unexpected.

A courtier had banteringly asked His Majesty (and surely no man was ever better able to answer with authority), "Sire, is it possible to love several women at the same time?"

"Without a doubt it is!" answered Louis XV with spirit. "Do we not have at the same time an equal affection for the wines of Bordeaux and Burgundy?"

The winelands of the once Grand Duchy of Burgundy are today the most democratic in France. Literally myriads of small proprietors cultivate minute holdings, some with only a few rows of vines. Whereas the Seigneur of Château d'Yquem has 222 acres in that one estate and owns several more besides, twelve proprietors own among them the sixteen acres which produce Montrachet, commonly called "Château d'Yquem of Burgundy." In 1782, however, the Archbishop of Paris exclaimed *fortissimo* and *ex cathedra*: "O Montrachet! Dear Montrachet! Divine Montrachet!!! First and finest of white wines, I salute thee!"

Such is the democracy of Burgundy that in this region the "little fellows" are almost wholly in the hands of Big Business, and here the House of Calvet reigns with as great proportionate supremacy over all rivals as the House of Morgan in New York. Indeed is not Democracy the apotheosis of Business with the biggest possible "B"?

Because there is no aristocratic and official classification of the wines of democratic Burgundy into haughty *crus*, because scarcely any of the châteaux of Burgundy are wine châteaux, and because there is very little estate bottling, the casual fancier of Burgundy is sadly at the mercy of unscrupulous firms which stick gorgeous and deliberately misleading labels on their devious wines.

Buy your Burgundy from an unimpeachable source, and try to

after shaving
after bathing
after exercise



this famous
French formula
for the skin

For tired faces and tired bodies alike . . . for the tiny nicks left after the razor-blade—the relaxed tissues and open pores after a hot bath—the muscles stiffened by violent or unaccustomed exercise . . . nothing has ever been perfected quite like Pinaud's Lilac (Lilas de France).

Made from essences still compounded by Pinaud in Paris—as it has been for nearly a hundred years—this delightful toilet-water and astringent with its faint fragrances of lilacs, has been the companion of ladies and of gentlemen the world over since 1848

Its refreshment is instant . . . its fragrance smartly unobtrusive . . . its deodorant and astringent action unfailing. Pinaud will be delighted to send you a sample bottle for your personal use free, if you will address: Pinaud, Inc., Dept. F, 220 East 21st Street, New York.

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remember no more than that the greatest Burgundies are those from the *Hospices de Beaune* (not simply "Beaune," of which there are dozens). In addition keep in mind the wines which have made glorious these names: Clos Vougeot, Romanée, Richebourg, and Chambertin—Napoleon's favorite. Among the Chablis or white Burgundies the great name to utter with fish is Moutonne and with dessert "divine Montrachet."

When a battalion of French infantry is marching along Route Nationale No. 74 and comes abreast of Clos Vougeot, the commanding officer, by invariable custom, orders his troops to halt and salute the vines with full military honors—a *beau geste* first ordered, according to Stendhal, by one General Bisson, otherwise obscure, but thanks to his happy thought, immortal.

Hock and the Doctor

Since these brief remarks are primarily concerned with the natural wines of France, the hocks or German white wines can receive but passing notice. They are almost the only non-French, natural wines in the lexicon of the connoisseur, and at their best they are superb.

Among the wonderful wines of the Rheingau, the "Cream of Rhine

Wines," are those of Schloss Johannisberg, Steinberg (which is operated as a Socialistic community of workers by the Prussian State), and nearby Hochheim, from which all hocks take their name.

From the Liebfrauentstift at Worms comes the true, wildflower-scented Liebfraumilch or "Milk of the Mother of Christ," a delicious wine which deserves the popularity it reached by adopting an audacious name. Finally from the banks of the Moselle comes another exquisite German wine popularized in England with the slogan, "If you drink the Doctor, you will need no doctor!" Many have wondered why this particular Bernkastler is called "Doctor." Merely because the vines belong to a lady high Frau Wittwe Doktor Hugo Thanisch!

Memorabilia

Since most people cannot remember more than three vintage years, but since anyone after a moment of powerful concentration *can* remember three, fix these in mind forever: 1919 for red Burgundies; 1920 for red Bordeaux; and 1921 for all white wines. Concentrate! You will indeed be richly repaid. We are all extremely lucky that a vintage at once so recent and so available as 1921 is probably the

greatest white wine year of all time.

You cannot forget Château d'Yquem 1921. You can scarcely forget the four *Grands Crus* of Bordeaux: Lafite, Latour, Margaux, and Haut-Brion.

The champagnes are all monopoies, "Ford wines," so you have only to remember the trade-mark you like, and to order 1921 when you see it on a wine list, for *all* white wines were better in that pluperfect year!

Remember lastly that before attempting to know wine, you should know corks. When you are paying 500 francs for *une prestigieuse bouteille*, supposed to be a Lafite 1858, and the cork, after extraction, swells up to double its size and has a soft, spongy feel, are you satisfied? You are not!

You know that a cork even fifteen years old feels almost as hard as your cane and cannot swell up because long compression has infallibly destroyed its resiliency. You know too that a cork should smell only of wine, that a musty cork means a stale bottle. Lastly you know, of course, that with increasing age the stain of either a white or red wine slowly penetrates the cork, so that a bottle twenty years old or more will have stained the cork for at least half its length.

The nature of wine

Coca-Cola is dead, and so is gin. But wine is alive. "Wine is the God of vegetables, as Man is the God of animals." Like man, wine is susceptible to sicknesses and has the power to cast these off. In scientific terms, the life of a wine begins with the hot youth of fermentation, when its natural grape sugar, $C_6H_{12}O_6$, changes partly into carbon dioxide gas, $2CO_2$, which escapes, and partly into natural alcohol, $2C_2H_5O$. Next comes the long, ripening middle-age, during which wine, like man, progresses arduously toward mellow perfection. This is followed by the slow decline or perhaps (of a wine kept too long) the sudden breakdown into vinegar, which is Death.

Once acquired, a sense of the personality of wine is never lost. Every bottle has distinct personality. In wine there is not only *veritas*, but a mystery as deep as life itself. Let the final, authoritative proof that wine possesses certain human characteristics be supplied by so great and meticulous a British expert as Mr. P. Morton Shand:

"Wine, like man, is imbued with the spirit of filial piety. Each year as the vine, '*le glorieux bois tortu*,' passes anew through the four great crises of her being—rebirth, adolescent

THE SEA LYON CREED OF QUALITY

To Produce—A boat of sustained high speed rather than acclaim the personal distinction of great racing prowess;

To Produce—A boat capable of exceptional performance rather than aspire merely to great production;

To Produce—A boat whose very style bespeaks its own beauty rather than unduly emphasize superficial details;

To Produce—A boat designed so faultlessly, built so soundly and priced so fairly that all men ultimately will recognize in Sea Lyon the ultimate in value.

Although 80% of Sea Lyon owners have given up other makes of boats to own a Sea Lyon, we have never heard of a single owner giving up a Sea Lyon for some other make of boat.

Let us send you "Our Vanity Book" and the 1930 Sea Lyon Catalog.

SEA-LYON



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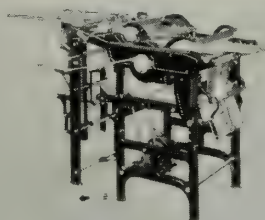
Let a Multigraph representative tell you about the Model 66 Addressing Multigraph and other units in the complete Multigraph line.

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1834 EAST 40th STREET CLEVELAND, OHIO

The Multigraph Sales Co., Limited, 137 Wellington St. W., Toronto, Ontario
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DO YOU KNOW YOUR MARKET?

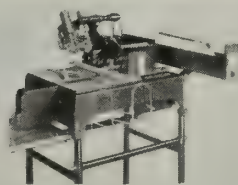
We have developed Multigraph equipment to meet the special requirements of today's conditions which put a premium on selective selling.



88 Folder



58 Folder



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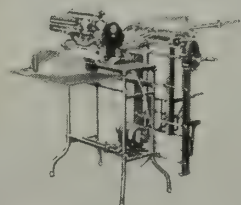


Model 60 Multigraph

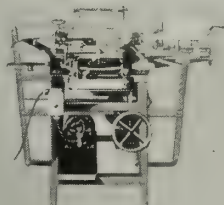


Model 100 Multigraph

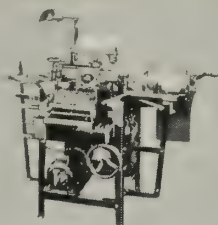
— The *MULTIGRAPH* Line —



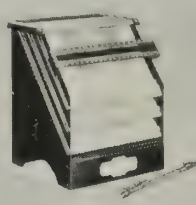
Printing Multigraph



Lever Compotype



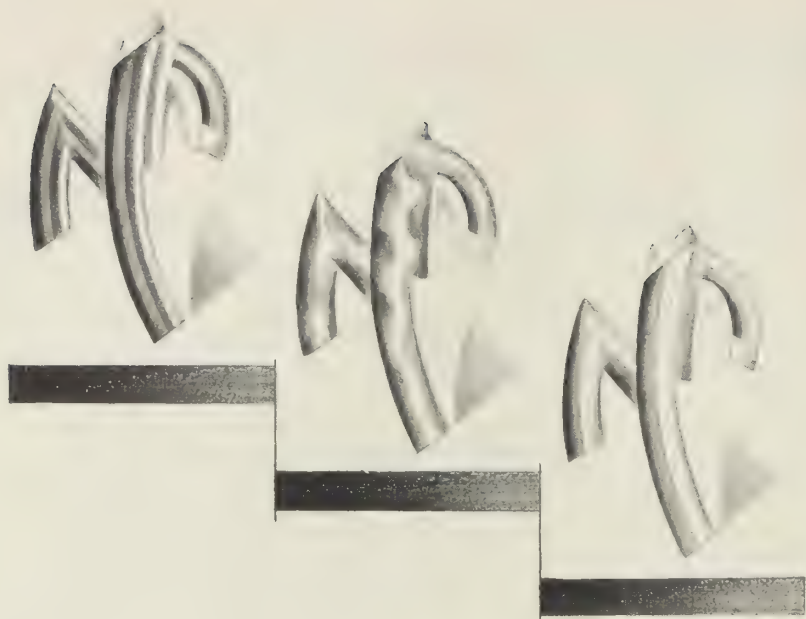
Keyboard Compotype



59 Typesetter



Set-o-type



When it's a question of **PAJAMAS or a TOOTH BRUSH**

Pajamas? You've that gigantic pair of silk ones Aunt Flo (bless her) made you for Christmas. And that little blue model Horace has outgrown. These ought to about cover any size guest that comes your way.

Tooth brushes? Now that's where you show yourself the perfect host. In the cabinet of your guest bathroom place two, new Tek tooth brushes. (Not a bad idea to have their handles match the general color scheme. And one should be the kind that contains dental floss.) Now think of the pleasant results. Your guests for the night will say—"Thank the Lord for a tooth brush—and it's a Tek, too." And, because it is a Tek, it will confirm their respect for your good taste.

People, accustomed to Tek, miss their *Tek-sercise* (physical culture of the gums and teeth) when they are out of reach of a Tek brush. So after taking your guests at contract or golf, the offering of Tek at bed-time is the friendly gesture that makes everything right.

Tek's extra wide brush-head massages gums automatically every cleaning stroke.

Tek
the modern
TOOTH BRUSH

All we ask is that you try Tek tonight and then your old brush tomorrow.



Johnson & Johnson . . . World's Largest Makers of Dental and Surgical Dressings

maidenhood, conception and the long travail at the end of which she brings forth the ripe fruits of the vintage (the vine is feminine in all languages, just as wine is masculine)—the wine, her offspring, suffers a sympathetic excitement and distress in a degree often amounting to functional disorder. The seasons at which, as the French say, the wine is troubled and 'labours,' are the *débourrage*, or the first budding of the vine-shoots in spring; the *floraison*, or the flowering of the vine in May; the *véraison*, or the forming of the racemes in high summer, and the *vendange*, or the ripening of the grapes for the wine-harvest of the autumn. At these periods, and more particularly during the blossoming and the vintage, wine, like a man in a state of nervous agitation, is 'not quite itself.' In some cases, indeed, it is almost undrinkable. But this ague is of short duration and the passing distemper leaves the health of the wine unimpaired. No scientist has yet been able to account for this telepathic pain which the parent vine inscrutably communicates to the blood of her grapes years after their clusters were separated from her branches. It is generally the younger and more tender wines that are most affected, though cases have been recorded where these manifestations have continued for twenty-five years: as long, as it were, as the wine could still feel the promptings of family sentiment and respond to the family instinct. Most mysterious of all is what happens to European wine that is taken to Australia, South Africa or South America: climates where the vine

buds, flowers and fructifies at seasons of the year which are quite different from those corresponding to the same changes in its natural history in our northern latitudes. Instead of reflecting these changes, if at all, as and when they occur in the lands of its exile, the European wine continues loyally, year by year, to be distressed in the particular weeks of those particular months which synchronise with these various stages in the vine's development in far off Europe, according as the putting forth of her leaves, her blooming and the ripening of her grapes may be late or early at home, for all the world as though it were maturing in the cellars of its own native *château* beside the vineyard where it was grown. To the puberty and parturition of the local Australian, South African or South American vines growing near its prison walls it remains utterly and obstinately insensible. It has long been recognised, too, that the changes of the moon have a disturbing influence on wine, though this was once regarded as no more than an ignorant peasant superstition. All conscientious and experienced wine-growers and wine-merchants are careful never to rack, fine or bottle any wine, even the merest *vin ordinaire*, during these lunar periods, or when stormy or thundery weather is prevalent, choosing for preference calm, dry weather with a slight north wind. Wine is never so fine, never so characteristic, as when it is drunk where it has matured, within sight of the vines it sprang from and the wine-press in which it was vinified."

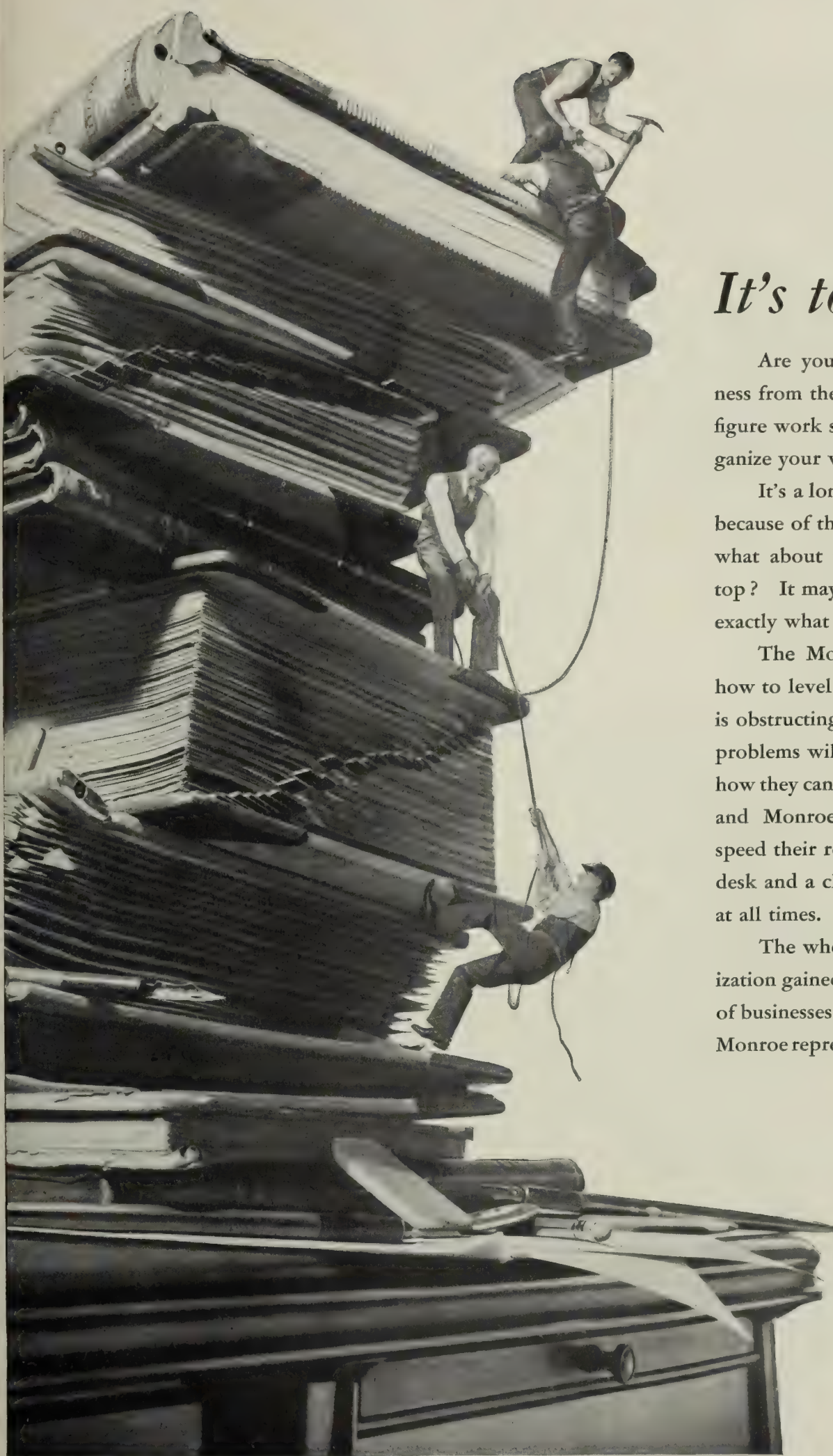
Times v. Times

[Continued from page 64]

to point to New York as an example of what a newspaper man can do for his community." Rochester offered a better opportunity. But even Rochester was smaller than New York, and Louis Wiley got a job with the *New York Sun* under Dana. A few weeks later, he left the *Sun* and joined the *Times*, which Mr. Ochs had just taken over, and since that first year of the new régime he has supported the policies and purpose of his employer. The first object to meet the eye in Mr. Wiley's apartment is a large desk and on it, alone, a picture of Adolph Simon Ochs.

Mr. Wiley is not a man to let business routine destroy him. He makes a game of it. Much of his

thinking he does impulsively from step to step, scattering his home and his office with pencil jottings on a multitude of subjects. He walks, every decent morning, from Seventy-first Street to Forty-third Street with his secretary beside him, so marshalling his advance as never to be halted by the traffic lights, dictating occasional observations as he goes. He has two offices, one in the midst of his duties, the other high up in the Times Tower, where he can sit on a high cushion in a revolving chair, with his feet on an elevated hassock, his photographs around him, and play his rôle. He travels much, frequently abroad, and always among people of importance. He has the continuous,



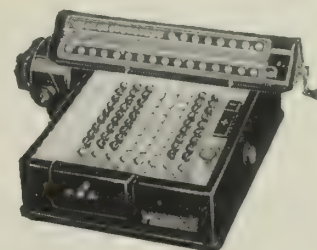
It's tough climbing

Are you getting the best view of your business from the level of your own desk, or is the figure work so mountainous that you have to organize your workers into climbing parties?

It's a long and difficult climb, dangerous too, because of the innumerable chances for slips, and what about the view when they finally reach the top? It may all be worthless if it does not show exactly what you wanted when they started.

The Monroe representative can show you how to level this mountain of figure work which is obstructing your view. A study of your figuring problems will enable him to tell your own clerks how they can apply intelligently Monroe Machines and Monroe Methods to your own system, to speed their routine work and to give you a clean desk and a clear up-to-date view of your business at all times.

The whole experience of the Monroe organization gained through daily contact with all types of businesses is at your call. Telephone your local Monroe representative or write Orange, New Jersey.



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HIGH SPEED ADDING-CALCULATOR
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JUST over night from peopled places lies this cool forest playground . . . with silver lakes, shady bypaths, fragrant air and sport for all.

Hundreds of welcoming havens . . . at Muskoka, Kawartha, Lake of Bays, the 30,000 Islands of Georgian Bay or the beautiful shores of blue Lake Huron, offer infinite variety in summer-time pleasures.

Golf and tennis, fishing, swimming and canoeing in an ideal breeze-swept environment.

Or . . . paddle and camp in the solitudes of Algonquin Park, Timagami or Nipigon Forest Reserves where silence reigns and game fish leap.

Reasonable rates and comfortable accommodations for summer guests.

Full information from any Canadian National Office

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CHICAGO
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DETROIT
1523 Washington Blvd.

MINNEAPOLIS
518 Second Ave. So.

PORTLAND, ME.
Grand Trunk Ry. Sta.

SAN FRANCISCO
689 Market St.

CINCINNATI
4 So. Michigan Ave.

DELUITH
430 W. Superior St.

NEW YORK
605 Fifth Ave.

PORTLAND ORE.
302 Yamhill St.

SEATTLE
1329 Fourth Avenue

ST. LOUIS
24 E. Fourth St.

KANSAS CITY
705 Walnut St.

PHILADELPHIA
1422 Chestnut St.

WASHINGTON, D. C.
901—15th St., N.W.

and, to him, the necessary and gratifying sense of being in touch with the world's life. And he has never lost his own. Mr. Ochs in 1921 described Mr. Wiley as "of unusual ability, alert, indefatigable, and agreeable . . . One of my most useful and valuable assistants." He is much more than that. He is the only man whose personality has survived the *Times*. The rest of them are elements of value in the richest news-dispensing business in the world.

THE LONDON TIMES

The *Times* will never move. It cannot lose its Character.

Let the New York *Times* have its Wealth and the journals of Mr. Hearst (or the Hearst-while London *Daily Mail*) their Personality. What the *Times* of London has is its Character. Sometimes it has had nothing but its character. Sometimes its character has been all bustles, bangles, and Paisley shawls. But the *Times* has never lost it. If it did, like any kitchen maid or clergyman or prime minister, it would never get another place.

Those with characters to maintain are careful where they live. The *Times* occupies premises in Playhouse-Yard and Printing House Square, Blackfriars, in "the City." The site is respectable. The deeds run back through the King's Printing House, the Blackfriars Playhouses, one William Shakespeare, and a Dominican monastery. The conveniences are honorably few: Fleet Street, the news center of London, is far away; so is the Stock Exchange; so are the offices of Government. The composing rooms are dark and crowded. The two machine rooms are cramped and inconveniently located with reference both to the foundry and to the dispatching room. Many of the offices are in a building which was, from 1784 until quite recently, the private house of the Walter family. But the *Times* will never move. When, some years ago, it was suggested that it might find better quarters elsewhere, the whole body of its workmen and a large number of its readers protested. And the upshot of the matter was an appropriation of 50,000 or 75,000 pounds sterling (\$242,500 or \$363,750) per year for reconstruction of the plant in some undefined future. In the meantime the present plant, enlarged since its Hoe & Goss presses were installed under Northcliffe in 1908, succeeds in putting out more than 180,000 copies per day of the

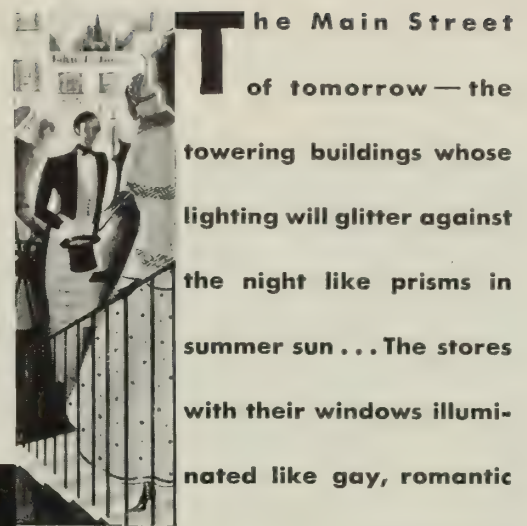
most beautifully printed and most skillfully edited of newspapers. And it is the boast of the *Times* that "from the year 1784 until the present day all the chief improvements in the printing of newspapers have been either invented or first tried and fostered in what is now the office of the *Times*."

But a respectable address is not enough. There is also the question of opinion. No more certain way of losing an excellent character than the expression of unworthy opinions. The opinions of the *Times* are impeccable. "The *Times*," according to a statement generally supposed to have been written by Geoffrey Dawson, who has returned to the editorial chair under the Astor-Walker régime, "claims to be national, independent, and complete . . . It is committed to no political party, but supports whatever party, whether in or out of power, it believes to be acting in the national interest." It has always, as a matter of fact, believed the Conservative Party to be "acting in the national interest." And its independence consists in occasional criticisms of Conservative conduct which are all the more delightful to read because they are fatherly. But it would be a mistake to suppose that there was anything venal about the opinions of the *Times*. Not even Northcliffe could change their shape. They are imbedded in the presses of the plant.

As for its news, its practice of its profession, the *Times* deserves all the good that is said of it. Its news is true not only in its facts but in its presentation. The event described has not only happened, but it has happened in the crisp daylight of accurate and intelligible English. The correspondents and editors of the *Times* are so far masters of their tongue that they can be just without being general, and not only plausible but precise. In this its style differs marvelously from the lucid and reasonable insipidity which the New York *Times* seems to require of its correspondents and which many of them are able to supply. Whether the dearth of newspaper writers capable of living speech is responsible for the style of the New York *Times* or whether the style of the New York *Times* is responsible for its lack of writers is a question for those who care to ask. But if the situation is fortunate in that it permits the New York *Times* to find an abundance of reporters at \$60 to \$100 a week, it is also not without its dangers. An editorial by Mr. Lippman or a column by Mr. Heywood Broun or a sports story by Mr.

...LIGHTING TOMORROW'S

MAIN STREET



The Main Street of tomorrow—the towering buildings whose lighting will glitter against the night like prisms in summer sun... The stores with their windows illuminated like gay, romantic stages... The signs, flinging their jeweled messages against a velvet sky... The theatres... all these are the concern of Nela Park engineers—today.

Here—at the lighting headquarters of the world—engineers and scientists are working, not only on tomorrow's Main Street, but on the illumination for tomorrow's homes and tomorrow's industries.

Here—in the shadow of the greatest name in electricity—the manufacture, application and sales of General Electric Mazda Lamps have a common meeting ground—a desire to be ready for tomorrow—today. National Lamp Works of General Electric Company, Nela Park, Cleveland, Ohio.



GENERAL ELECTRIC
MAZDA LAMPS

Join us in the General Electric Hour, broadcast every Saturday evening on a Nation-wide N.B.C. Network



Profit is also a Product of the Cool, Clean, Quiet Power Plant.

"A SAVING is a profit in the making" was never truer than in the modern power plant where so much of the heat is put to work effectively that the power house is cool. Fuel feeds into the furnace quietly, steadily, without smoke or dust.

Such a plant is a source of profit with frequently measurable influence on the dividend record.

This whole subject of profitable power production merits the attention of every major executive.

The illustration shows an interior view of one of the American Tobacco Company's power plants.



J. E. SIRRINE & COMPANY

Engineers

Greenville

South Carolina

McGeehan might wreck the sheet.

In bulk, the news published by the *Times* of London is less than that published by the New York *Times*. The *Times* of London scraps 45 per cent of its cabled news and calls the process selectiveness. The New York *Times* scraps 5 per cent and calls it waste. The New York *Times* covers an important story from four or five angles. The *Times* assigns it to one man and makes him responsible for the whole. Recently the opening of an Egyptian tomb alleged to contain the mummy of a queen was witnessed by the correspondent of the *Times*. There was also present, on a tip from the *Times* of London, a representative of the New York *Times*. The tomb was opened. The London office of the New York *Times* received a wire from its representative stating that the tomb was empty. And the London office of the New York *Times* offered the story, such as it was, to the *Times*. It was politely but definitely refused. And the next day the *Times* published (from its "own correspondent") the identical story. He had rootled about in the tomb until he was assured, and was able to record for all time, that that tomb was EMPTY.

So far as domestic news is concerned, the *Times* makes no effort to compete with the scooping activities of its London competitors. It will frequently publish a story of murder or scandal one or even several days after the penny press has reported it. It views itself as the historical record of current events and cannot afford to regale its readers at the risk of misinforming posterity. In the words of "a correspondent," "There is printed every morning a certain number of copies called the Royal Edition, on paper specially made to resist the decay caused by time, and having a life of several hundreds of years. Two copies of this edition are sent to the King every morning wherever he is in residence, the farther from his capital the swifter the means of transport."

And in addition to its opinions and its news the *Times* has its departments. Its reports of law cases are so accurate and so neatly summarized that they are admitted as authority in the British courts and are cited for advance cases in American briefs.

Its society notices are indispensable to a society that has already read the *Daily Express* and the *Daily Mail* for the gossip.

Its agony columns are better reading than most best sellers and made up of about the same mate-

rial. "LITTLE PAL—Remembrance sometimes makes us sad, yet shall we not seek the happiness which may be ours? Nous verrons! s.B.M... s...E." "YOUNG LADY desires PURCHASE good, slightly worn CLOTHES; small figure. Write Box V. 1992." "PORTRAITS of the late 18TH CENTURY ENGLISH SCHOOL WANTED by advertiser buying for American collectors; very high prices paid for beautiful women and children. Write Box M. 1331." "CAN ANYONE OFFER POSITION with permanent prospects ex-officer (War period wounded), aged 35, single, good birth and education, now disengaged and in desperate circumstances? . . ."

Its correspondence column is superb and is frequently a source of news. The gentleman who wrote letters to the *Times* may be anyone. He may be Lord Birkenhead writing about the perfidy of the Attorney-General; Robert Bridges protesting against a proposed aëro-drome near hallowed Oxford; Horace Plunkett on agricultural policy; A. P. Herbert, the humorist, seriously proposing a water bus upon the Thames; Lord Cushendun explaining his differences with Beaverbrook as regards the Empire trade platform; "A Naval Wife" on her husband's pay; the Aga Khan on British policy in India; Bernard Shaw on the stupidity of film censors; Lord Robert Cecil on the felicities of the League of Nations Union; Balfour, Lloyd George, and Smuts "as members of the War Cabinet responsible for the Balfour Declaration twelve years ago"; whimsical Mr. A. A. Milne on musical censorship.

And its supplements, the Literary Supplement, the Educational Supplement, and the Trade & Engineering Supplement are excellent. The Literary Supplement appears Thursdays, sells at 3d and has a circulation of 30,000. The corresponding section of the New York *Times*, its Book Review Section, goes out with the Sunday paper and has, consequently, a circulation of 750,000. The two offer a contrast which is characteristic of the two papers as a whole. The Literary Supplement carries its advertising upon its literary prestige, which is certainly greater than that of any other literary supplement; the Book Review Section of the New York *Times* supports its literary prestige upon its advertising, which exceeds the book advertising of any other paper in the world. Where the first is read for what it has to say, the second is read for what it has to sell. The book reviews of the New York



Next winter's comfort will be planned this May

*"When it rains I can't fix it;
when it don't I don't need to."*

THIS is an old, old Arkansas Traveler's joke of the man who never modernized his roof. Now, when the earth shakes off winter's spell and nature makes all things new, is the time to check the things in your home that need renewing.

If your heating plant has left fresh in your memory discomfort and extra labor and over-large fuel bills endured all winter through, now is the time to plan so that next winter won't be another like the last.

Now, in short, is the time to have your heating contractor install a new Capitol boiler to serve Capitol radiators. The Red Cap, the Red Top, the Red Head . . . whichever you choose, heating quality in every detail will increase the value of a new home or an old one. They burn coal, coke, oil, or gas.

Convenient payments if desired

Don't let cost delay you. Moderately priced *Capitol Guaranteed Heating*, warranted in writing, can be completely installed for a few dollars down and a few dollars a month under the Capitol Deferred Payment Plan. Let us send you our manual of better heating, "A Modern House Warming."



The Capitol Red Cap

Embodies every improvement known in round boilers. A thick blanket of rock wool, the finest insulation obtainable, suggests its quality in every particular. For medium sized residences

The Capitol Red Top

This is, we believe, the finest square boiler yet achieved. Rock wool insulation. Staunch jacket in baked enamel. Vitreous enamel doors

The Capitol Red Head

To small homes this handsome heat-maker with rock wool insulation, brings the advantages of radiator heat for little if any more than the cost of your second choice in heating equipment



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AND RADIATORS

Give your typist half a chance

***and she'll turn out
twice the work!***

No one can do a good job with the wrong sort of tools — and the girl who does your billing or types your orders, is no exception to the rule.

If you still use loose forms and carbon paper, for invoices, orders, bills of lading and other records, probably half or more of her time is spent in *waste* motions — in doing things by hand that a machine can do automatically.

Chances are your operator is just as anxious as anyone in your organization to do a full job. She can't, however, if she has to spend half her time in: (1) inserting carbon between forms; (2) jogging sheets in alignment; (3) inserting in typewriter; (4) straightening in machine; (5) finding writing position; and (6) separating carbon paper from typed forms.

These six wasteful stops are eliminated with "non-stop" typing — and thousands of users of Multi-PLY forms testify to the fact that if you'll give your typist half a chance — by giving her the proper tools to use — she'll turn out twice the work.



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With Multi-PLY Forms, machine operations replace costly hand operations. Your typist's time is 100% productive. No waste motions. No lost time. No carbon to handle. No getting ready or finishing up operations. Just typing — that's all.

For business men who hate waste, there is a portfolio which fully explains the Multi-PLY "non-stop" method — and shows how it saves time and money, cuts red tape, increases accuracy and speeds up plant operation.

May we send it to you?

The Globe Register Company

DIVISION OF UNITED AUTOGRAPHIC REGISTER CO.

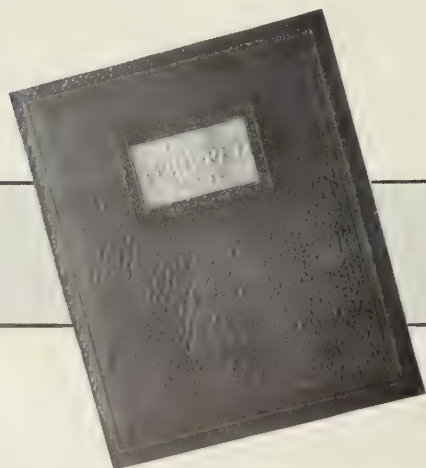
Branches: all principal cities.

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The Multi-PLY Portfolio will be a worth-while addition to your business library — whether you're interested right now or not.

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M. M. **DAVIS** & SON

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CUSTOM BUILDERS
of fine Sail and Power Yachts

SOLOMONS

MARYLAND

CHANGES of ADDRESS

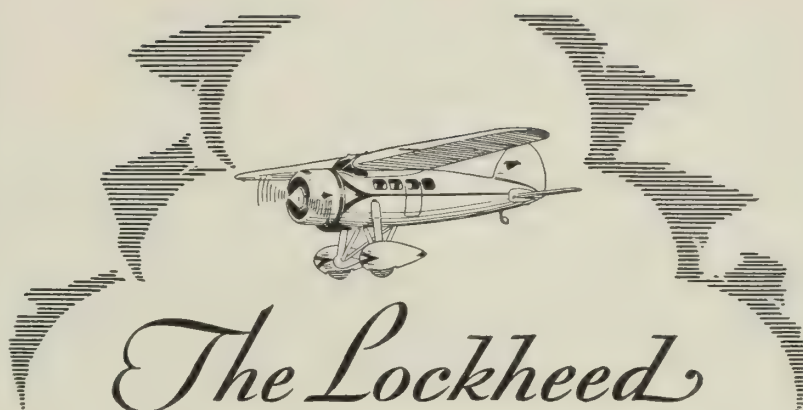
Notice of a change of address, to be effective with the June issue of FORTUNE must reach the Subscription Department prior to May 10th.

The Post Office does not forward magazines, including FORTUNE, which are mailed under the Second Class Rate of Postage.

It is important that your former address be indicated when advising us of the new.

Fortune

Subscription Dept., 350 East 22nd St., Chicago



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AMELIA EARHART

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Shell Petroleum Corporation

COLONEL ARTHUR C. GOEBEL

LIEUTENANT A. HAROLD BROMLEY
for the Tacoma Chamber of Commerce

GENERAL ROBERTO FIERRO
Director of Civil Aviation, Mexican Government

CAPTAIN JOHN A. MacCREADY
Shell Oil Company of California

JOHANNA FAY SHANKLE of Boston

MONSIGNOR E. G. EORDOGH
for the Hungarian-American Ocean Flight

ASA CANDLER, JR., of Atlanta

JOHN HENRY MEARS of New York

ALASKA - WASHINGTON AIRWAYS
Seattle (two planes)

NEW YORK, RIO & BUENOS AIRES
LINE, INC. (two planes)

DETROIT AIRCRAFT

UNION TRUST BUILDING, DETROIT

CHANIN BLDG. NEW YORK • ROOSEVELT BLDG., LOS ANGELES

LOCKHEED AIRCRAFT CORPORATION
EASTMAN AIRCRAFT CORPORATION
RYAN AIRCRAFT CORPORATION
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PARKS AIR COLLEGE, INCORPORATED
PARKS AIRCRAFT CORPORATION

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The
DRAKE

HOTEL Chicago

LAKE SHORE DRIVE AT MICHIGAN AVENUE

Times are, for the most part, dull, its reviewers without authority, and its reputation among writers (as distinguished from Literary business-men) nil. The reputation of the *Times* Literary Supplement on the contrary is high, its matter interesting, and its contributors important. It would be difficult to name a contemporary English writer of distinction whom the *Times*' rule of anonymity has not covered (and made known). Among its contributors in the generation now coming to power are, or have been, T. S. Eliot, Herbert Read, Richard Aldington, Robert Graves, and as many more as one cares to take the space to name. That there is some relation between excellence and profits is indicated by the fact that whereas the New York *Times* Book Review charges \$1,300 a page for a circulation of 760,000, the Literary Supplement of the *Times* of London is paid £100 (\$485) a page for a circulation of 30,000, or about nine times as much. The same thing is true of advertising in the two papers themselves.

Between the editorial pages of the *Times* of London and the New York *Times* no such easy comparison is possible. They differ in kind rather than in degree. The editorials of the New York *Times* are comments or expressions of opinion or occasional essays embroidering some bit of homely news with rather unnecessary drafts upon Bartlett's *Familiar Quotations*, or making sly, waggish fun of some young painter or poet whose manner resembles nothing the editors of the New York *Times* have ever seen. The leading articles of the *Times* of London, on the contrary (though they may bloom sometimes with very similar flowers), contain a considerable increment of news. They are frequently devoted to full and exhaustive discussions of problems which have appeared piecemeal in the daily dispatches. And they are read by people to whom pronouncements of editorial opinion in general are about as important as the *Congressional Record*.

The editor of the *Times* of London must consequently be a different kind of man from the editor of the New York *Times*. Mr. Geoffrey Dawson (born Robinson: changed his name to Dawson by Royal Licence in 1917 for reasons said to revolve about a legacy) is a graduate of Magdalen College, Oxford, and a Fellow of All Souls. He was trained in the Colonial Office for three years, and in Lord Milner's school for bright young men in Africa for four. For five years he edited the Johannesburg *Star*. He

has had experience of the Empire and of the British Isles. Also he "belongs." He believes in the majesty of the *Times* and the "best people." He is not always approachable (but when approached agreeable and human), and he is given to corresponding distantly with his various departments. He can be counted on (with the *Times*) not to be aware of things it would be embarrassing to notice. But he is capable of emotion, e. g., his break with Northcliffe, leading to his resignation as editor in 1919. Although he is not one of the great editors of the *Times*, he is clearly in the great tradition for he belongs to the (once) ruling class, he has himself been employed in the government of the Empire, and he possesses the kind of education which has produced the kind of tradition which the *Times* preserves. The *Times* was once described as a newspaper written by gentlemen for gentlemen. And the first part of that dubious description remains true.

Few newspaper proprietors could say, even if they cared to, that their journals were the *property* of their readers. The *Times* of London can say just that. The carefully preserved and protected character of the *Times* is not its own to change. If Northcliffe had changed it, he would not only have destroyed the *Times* but he would have done thousands of foreign-living Englishmen an irremediable harm: he would have robbed them of their goods. Should the Weekly Edition with its news, its special articles, its leaders, letters, illustrations, crossword puzzles, and chess problems selected from the six daily numbers of the *Times* and further enlivened with bridge hints for the garrison club-houses and the officers' wives, change in its form or substance, the sweltering porches of the consulate at Bushire would know it, and Indragiri and Pukapuka and Griffin Cove would be, by that much, farther off from London. "From Iceland in the frozen north . . ." begins the prospectus which recites the merits of this weekly. And so it is. There is no considerable settlement of the British Empire and no Colonial town to which the weekly does not go. And its power is immeasurable. What the Scotch prospector at Forty-Mile wants is not news of Glasgow. Anyone can give him that in time. He wants the look of something British and the familiar, human sameness of a thing he knows. In a world in which all other newspapers owe their profits to their ability to change, the *Times* remains unaltered. It cannot change. It has a character to keep.

Chancery Building, Detroit. Architect, Donaldson & Meier, Detroit. Contractor, Talbot & Meier, Detroit.

Montgomery Ward & Co., Albany, N. Y. Designed by W. H. McCauley, Eng., Chicago. Contractor, Wells Brothers Construction Co., Chicago.

Green Industrial Building, New York. Architect, Renwick, Aspinwall & Guard, New York City. Contractor, Turner Constr. Company, New York City.

Medical Arts Building, Nashville, Tenn. Architect, Alsop & Callanan, Memphis, Tenn. Contractor, Foster & Creighton, Nashville, Tenn.

Bayley Steel Products include the following

- Pivoted Windows
- Pivoted Windows Screened
- Projected Windows Commercial
- Projected Windows Architectural
- Casement Windows
- Continuous Windows
- Detention Windows
- Prison Windows
- Airport Doors
- Tubular Doors

The Loyalty of Bayley Users

PRODUCTS *designed right . . . built right . . . installed right* — this sums up a Bayley ideal that is creating an ever-growing volume of sales. And the significant fact is that much of this increase in business each year comes from loyal users who are so completely sold on the Bayley organization and Bayley products that they never take second thought when a new or enlarged building is under consideration. This roster of loyal users includes not only influential owners but also leading architects and successful contractors throughout the country.

Obviously, they have found from long experience that for thorough engineering cooperation and for skilfully designed and masterly constructed steel windows and doors, Bayley is incomparable, giving the utmost value and lasting satisfaction. They have

also found that Bayley follows through — that even after an installation is completed, interest in the customer's satisfaction continues.

Only a closely-knit organization, backed by adequate resources and forty-nine years of experience, makes it possible for Bayley to build steel windows and doors that merit such loyalty from customers; and to offer engineering cooperation that eliminates uncertainty for architects and contractors . . . as well as regrets for owners.

An opportunity to demonstrate Bayley service is always welcomed. A Bayley man will gladly call and furnish any information desired, without placing you under obligation. Illustrated folder sent on request. The William Bayley Company, 148 North St., Springfield, Ohio.

BAYLEY STEEL WINDOWS & DOORS

District Offices

New York, 67 W. 44th St.	Cleveland, 449 Terminal Tower
Boston, 5 Park St.	Washington, 1427 I St., N. W.
Chicago, 75 E. Wacker Drive	Atlanta, 407 Bona Allen Bldg.
Springfield, O., North St.	

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Comfort, Quality, Luxury and low Purchase Price!

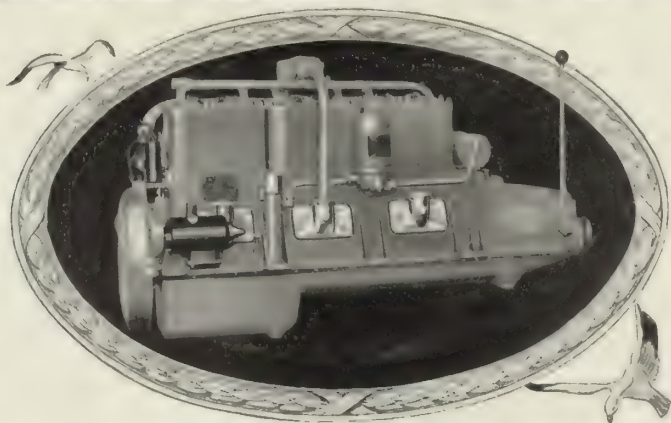
THE Cruisabouts provide the same luxury and comfort found on the big sea-going steamships. In addition to these, they have comforts, conveniences, privacy and seaworthiness unequalled in any boat under 30 feet in length. That is why the Cruisabouts are preferred by those who want comfortable living accommodations as well as safe water transportation.

The unusually low price of the Cruisabouts are equally as astounding as the quality and beauty of these jaunty yachts and are within the means of any successful man.

See the Cruisabouts at the showroom of Bruns-Kimball and Company, Fifth Avenue and Fifteenth Street, New York City or write for booklet "N" which will be mailed without cost or obligation to you.

RICHARDSON BOAT COMPANY, Inc.
454 Sweeney Street North Tonawanda, N. Y.

Richardson Cruisabouts



SCRIPPS Powered

The wide acceptance of SCRIPPS Motors is best expressed by the ever growing list of standardized craft offered with SCRIPPS as standard or optional equipment.

Fifteen models—15 or 200 Horse Power.
High speed and medium duty.

Interesting literature will be mailed upon request.

BANFIELD—6 Models
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KYLE "43"
MATTHEWS*
MINETT-SHIELDS
NORTH STAR
ROBINSON SEA GULL
Twin Installations
SEA LYON "40"*
STEPHENS
WHEELER "PLAYMATES"

Foreign
BRITISH POWER BOATS
OSBORNE-CRAFT—England
CLAUS-CRAFT—Germany
DESPUJOLS—France
*Optional

SCRIPPS MOTOR CO., 5844 LINCOLN AVENUE, DETROIT, MICH.

SCRIPPS

• THE MOTOR THAT CROSSED THE ATLANTIC •

Transactions—Continued

AMTORG MAKES DEAL WITH A. G. McKEE CO.

Who.—The Union of Soviet Socialist Republics and its agencies, the Amtorg Trading Corporation of New York and the Soviet Bureau for the Construction of the Magnet Mountain Steel Mill . . .

What.—Made a contract with Arthur G. McKee & Company, of Cleveland, Ohio, which designs and constructs steel plants, blast furnaces, oil refineries, for technical assistance in the building of the largest steel mill in Europe and the second largest in the world in the Ural region of the Soviet Union. More than 250 American technicians are expected to be engaged in the construction of the plant and its adjuncts, which will cost nearly \$350,000,000 . . .

Why.—"Because," says Peter A. Bogdanov, chairman of the Amtorg, "the metallurgical industry of the Soviet Union, which will have the task of supplying the steel required for the tractor, automobile, and general machine-building industries, now being intensively developed in U.S.S.R., is now being expanded on a truly great scale. It is expected to treble last year's production of pig iron, amounting to 4,018,000 metric tons, by 1933. In this development, as in many other branches of Soviet industry, American engineering experience and skill will play an important rôle. The present agreement is undoubtedly an important step in bringing about closer technical coöperation between the industries of the U.S. S.R. and the United States."

VAN SWERINGENS ADD 1 MORE RY. TO STRING; GET CONTROL C. & E. I.

Who.—Mantis and Oris Van Sweringen, Cleveland collectors of railroads . . .

What.—Acquired control of the Chicago & Eastern Illinois railroad through the purchase of the interest of the Thomas Fortune Ryan estate . . .

Why.—To tie together the western extremities of their system. The Chicago & Eastern Illinois, which runs between Chicago and

St. Louis, is an important north-and-south line that has long been coveted by the Van Sweringens. The Interstate Commerce Commission, in its Final Plan, awarded the Chicago & Eastern Illinois elsewhere. The Van Sweringens, unable to get what they wanted by asking, have apparently decided to adopt Pennsylvanian tactics, and take.

ALLIED CHEMICAL & DYE EXPANDS

Who.—Allied Chemical & Dye Corp., the largest chemical enterprise in the world . . .

What.—Will begin work on a \$20,000,000 second unit of the plant of its subsidiary, the Atmospheric Nitrogen Corp., at Hopewell, Virginia. The first unit of the proposed \$125,000,000 plant began operating in December, 1928 . . .

Why.—Plants, which take nitrogen from the air and manufacture commercial nitrates from it, such as this one and similar ones in Germany, where the process was invented, are seriously threatening the rich nitrate monopoly of Chile, where once the world went for nearly all its peacetime fertilizers and wartime explosives.

Reported Agreement Between Lloyd and Hamburg Companies Is Confirmed.

Who.—The Hamburg-American Line (the *Graf Zeppelin*, the *New York*) and the North German Lloyd (the *Bremen*, the *Europa*) . . .

What.—Reached an agreement for close coöperation for fifty years which provides for no actual merger but for interlocking directorates and the pooling of the receipts on the more important trade routes. Hamburg-American will not build large ships to compete with the new crack vessels of the North German Lloyd which now hold the ship speed records for crossing the Atlantic . . .

Why.—To meet foreign competition, decrease costs of operation, the companies will act as a unit with a fleet of 2,000,000 dead-weight tons. (See *Faces of the Month*, page 98.)

[Continued on page 138]

Prompt Payment of Losses



is a Part of CENTRAL Insurance

When you suffer loss from fire, tornado or other cause, you want your insurance just as quickly as you can get it. Realizing that fact and thoroughly sympathetic with your need, CENTRAL has made it an invariable rule to mail every check for a loss claim the same day on which proof of loss is received. Prompt payment is a part of CENTRAL insurance.

For over half a century, CENTRAL has given conscientious service to its policyholders, with real protection in its policies, fair adjustments and prompt payment of losses, and a conservative management which, for the last nine years, has returned a dividend of 30%—a substantial saving in insurance cost. The company's stability is unquestioned; its policies absolutely safe.

For Fire, Automobile, Tornado or Aircraft Insurance, CENTRAL policies command the interest of every careful buyer of insurance protection. All policies written through local CENTRAL agents. There is probably one in your territory. Full information, with name of nearest representative, on request.

**CHECKS
MAILED
SAME DAY
PROOF OF LOSS
RECEIVED**

*Organized
1876*

The **CENTRAL**

*A Friendly
Company*

MANUFACTURERS MUTUAL INSURANCE COMPANY
VAN WERT, OHIO

FIRE, AUTOMOBILE AND TORNADO INSURANCE FOR SELECT RISKS

Transactions—Continued

Marriage Agents Incorporate to Glorify Matches

Who.—The Marriage Brokers' Association of the United States, Inc., composed of the leading Hebrew schatchen, who hold their profession to be an ancient, noble, and necessary one. . . .

What.—Was incorporated in New York. A schatchen, or marriage broker, now charges \$250 and up for a satisfactory marriage, but his contracts with the satisfactorily married have no standing at law. . .

Why.—"There are," says Schatchen Meyer Cohen of the Bronx, "both males and females who are too refined and sedate to go to dances and affairs of that kind, so they come to us and we find a way to enable them to meet people of the type they desire. What we are seeking to do is to eliminate brokers who have been guilty of misrepresentations. This can be done if the

business is regulated by the state . . . We want things put on an ideal basis. Our business is a holy one, and we want mercenary people kept out of it."

Western Union Buys Amer. Tel. & Cable

Who.—The Western Union Telegraph Company . . .

What.—Purchased outright the assets of the American Telegraph & Cable Company, which consisted of two venerable cables from Sennen Cove in England to Dover Bay, Nova Scotia . . .

Why.—Because in May, 1932, comes to an end the fifty-year lease of the cables to Western Union. The cables are old. Western Union has eight other, newer, faster cables.

DU PONT EXPANDS

Who.—E. I. du Pont de Nemours & Company, Inc., leading organization in powder and explosives manufacture (also dyes, paints,

rayon, synthetic plastics, motion picture film, chemicals) . . .

What.—Acquired the Roessler & Hasslacher Chemical Company (assets more than \$15,000,000). Latest Roessler & Hasslacher patent: a process for manufacture of oxygen preparations employed in air purification . . .

Why.—du Pont has been a regular buyer of Roessler & Hasslacher products.

Monte Carlo Casino Adds Bars to Buoy Up Stocks

Who.—Société des Bains de Mer de Monaco, holding company for the once fabulously rich gambling Casino at Monte Carlo, Monaco . . .

What.—By allowing smoking, installing easy chairs, and reducing the price of drinks has made a frantic effort to restore the Casino's popularity. Now in a last effort a dice game will be opened in an annex . . .

Why.—Competition from other gambling casinos along the Riviera has resulted in the fall of stock of

Société des Bains de Mer de Monaco from 13,000 francs (\$520) to 7,000 francs (\$280) in twelve months.

Transoceanic Zeppelin Line Backed by Millions

Who.—Dr. Hugo Eckener, head of the Zeppelin Luftschiffbau, commander of the *Graf Zeppelin* . . .

What.—Announced from the home of National City Bank Chairman Charles E. Mitchell that transatlantic airship service plans were receiving backing and active interest from many United States companies, including the Aluminum Company of America, the United Aircraft and Transport Corporation, Union Carbide, the Goodyear-Zeppelin Corporation of Akron, Ohio, and Mr. Mitchell's National City Bank . . .

Why.—" . . . it means that the airplane and airship, long regarded as competitors, through two of their greatest companies [Goodyear and United Aircraft], are joining in a cooperative enterprise."

To the EXECUTIVES Of the United States...

who either have their offices in New York City or intend making it their headquarters in the near future.

In making a final decision as to a permanent home, there are several points you should consider. The ease and speed of transportation—the community and its surroundings—the better schools and shops near at hand—the pleasures and sports offered, and the restrictions in force that will protect your home from unpleasant encroachments in the years to come.

Chilmark Park offers all of these, as well as many other important suburban advantages.

This residential park of exceptional beauty is part of a famous estate overlooking the Hudson, only 47 minutes from Grand Central Station. Its landscaped driveways winding through the hills (completely improved with water, sewer, gas and electricity), offer building sites of rare charm and individuality.

A Community Club House for the residents of the Park has recently been completed, with club rooms, bowling alleys, squash courts and locker rooms; also a large outdoor swimming pool, tennis courts and several holes of golf.



This house in the English style, of stone and stucco construction, has just been completed and ready for occupancy.

An attractive English Home recently built by its owner.



Present Offerings Four 8 and 10 room stucco and half-timbered homes, with private garages, on approximately 1/2 acre plots, completely landscaped and ready for immediate occupancy. Three homes now under construction and two planned for. Also a few exceptionally choice residential sites.

Chilmark Park is carefully restricted and reserves the privilege of selecting its clientele.

Write, phone or come and see this beautiful community of better homes.

Arthur M. Holbrook, Broker, or your own broker is protected.

Chilmark Park REALTY CORPORATION

SCARBOROUGH-HON-HUDSON Ossining, N. Y.

TELEPHONE Ossining 1083



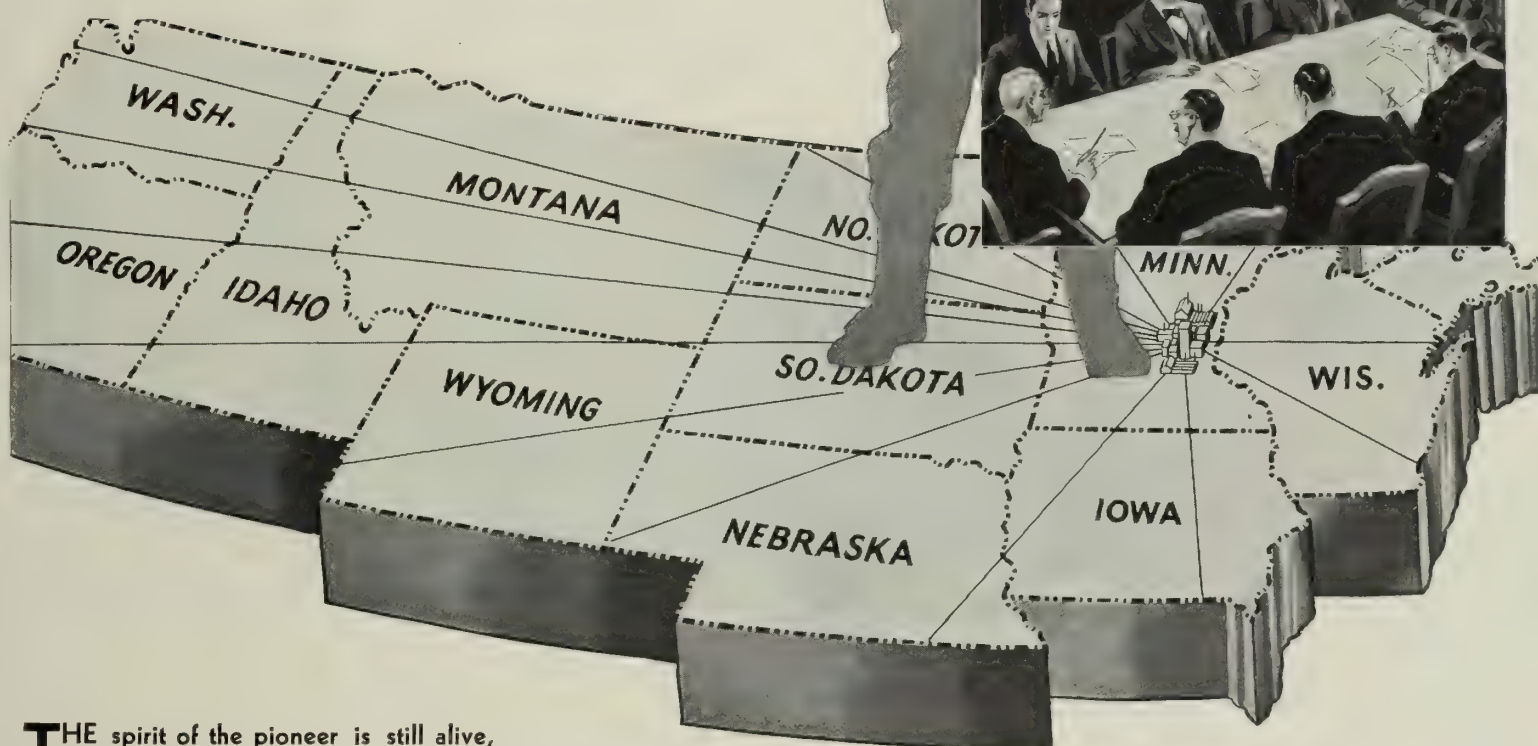
A rambling English cottage of stucco, half-timber and brick, nearing completion and ready for inspection.

A Brick Colonial Home recently completed for the purchaser.



Pioneers

OF THE NORTHWEST



THE spirit of the pioneer is still alive, even though the business suit has taken the place of buckskin, and money and securities are used instead of the blunderbuss and the Buffalo gun. The men who formed the Northwest Bancorporation are carrying on the work begun in the covered wagon days.

In certain sections, banking facilities became inadequate to supply the needs of agriculture and business in the middle Northwest. Leading bankers joined together to form a group of banks in this great section of the country with sufficient resources to keep the Northwest in step

with the rapid advance of American business. In a little more than a year, 97 banks and trust companies have become affiliated in this financial organization. The Northwest Bancorporation now has resources of over \$480,000,000 and offers a banking service through each bank, trust company and investment security company that is adequate to the needs of its community.

This new financial struc-

ture is not only valuable to the Northwest but it also offers to executives throughout the United States the banking strength, stability and service they require in the Middle Northwest. To any one interested in the financial pioneering of the Northwest Bancorporation, we will be glad to send our booklet "Blazing a New Financial Trail."

Write the Northwest Bancorporation, Minneapolis, Minnesota.



NORTHWEST BANCORPORATION

COMBINED RESOURCES OVER \$480,000,000
MINNEAPOLIS, MINNESOTA



h e a l t h

A hundred yards from The Glen Springs' main entrance, you can tee up on one of the sportiest courses in the State... nine especially-planned holes which offer the low-handicap man everything but undue fatigue, at the same time providing a really interesting game for the average player.

And afterwards — at your disposal are all the advantages which have made The Glen Springs so famous... the radio-active mineral springs... the Nauheim Baths given, as nowhere else in America, with a natural Calcium Chloride brine... the most complete and elaborate equipment for intelligent rest...

Here is more than a pleasant fortnight in magnificent surroundings. Here is a vacation whose tonic effects will last for years.

AT THE GLEN SPRINGS

Literature by addressing Wm. M. Leffingwell, Pres., Watkins Glen, New York



A Personal Invitation to Hotel Hollenden

I TAKE pleasure in extending to the readers of "Fortune" a most cordial personal invitation to make The Hotel Hollenden their home when in Cleveland. Located in the heart of Cleveland's business and financial district, The Hollenden, one of the distinguished hotels of the country, offers in grateful combination, homelike comfort, luxurious surroundings, an unexcelled cuisine and an atmosphere of smartness and reasonable and uniform rates.

The famous Crystal Dining Room is a brilliant and delightful place to dine. In the "Show Boat" you will find "a supper restaurant that is totally different" and music by Emerson Gill and his "Show Boat" orchestra.

The Hollenden Coffee Shop is modern to the last word, with fast counter and table service for the busy man and woman.

Sincerely yours,

Theo De Witt
Vice Pres. & Gen. Mgr.

In Cleveland — it's The
HOLLENDEN

THEO DE WITT
Vice Pres. and Gen. Mgr.

Marshall Field, Tom, Dick & Harry

[Continued from page 106]

A second and perhaps even more significant deal was Field, Glore's participation with Bonbright & Co. in the formation of a holding corporation to be known as European Electric Corp., Ltd.

The third, and the most recent of the three, was Field, Glore's offering with Lee, Higginson & Co. of 540,000 shares of Marshall Field & Co. stock at \$50 the share. Its significance lies in the fact that the issue was Marshall Field & Co.'s first offering of a portion of its stock to the public.

When Marshall Field III was twenty-six and already worth many millions of dollars, he found himself with nothing to do. He had been educated at Eton and Cambridge. He had enlisted in the First Illinois Cavalry in 1917 as a private, had been switched to the 122nd Field Artillery (33rd Division), had been honorably discharged after attaining his captaincy. Then he had worked, for a time, with Lee, Higginson & Co., first as an apprentice to its head bookkeeper, then as a bond salesman. Such was his background at the beginning of 1920. That year had seen the founding of what was then Glore, Ward & Co., with Glore as president, with Pierce C. Ward (no relation to the Wards of mail-order fame), Earle Reynolds, and Allen L. Withers. Glore had been a Chicago vice president of A. B. Leach (investments) and, although only thirty-two, had banked away a tidy sum. To these men went wealthy Marshall Field with his plan for an investment house, broader in scope, which would include them all. On January 1, 1921, was Marshall Field, Glore, Ward & Co. founded. So outstanding at that time was the name of Field in the new organization that local jokesters, still to recognize the ability of the rest of the firm, were prone to call the company by facetious names—of which the unsacrilegious version was "Marshall Field, Tom, Dick & Harry."

But not long was either Glore or Ward (who retired in 1928) to be known as a Tom, a Dick, or a Harry. Quietly the company went to work and built up a reputation as well as an organization. That same year (1921) a New York office was opened and new associates were brought in. Later a foreign office was established in Paris. When

Ward retired, the company took its present name, the officers their present titles.

Charles Foster Glore is forty-two and looks thirty. This is partially due to the man's happy genius for forgetting business when he knows his work is done. In the winter he likes to skate at the Lake Forest Winter Club; in spring and summer he plays middling-good polo. A few weeks after the Chicago Corporation was formed he set sail for the West Indies. He has a large capacity for relaxation.

Except for the month or so each year he usually spends at Miami, Mr. Glore lives with his charming wife and children in a not immense but immensely comfortable house at Lake Forest, where are his polo ponies. In 1910, when he departed from the University of Chicago, through the persuasion of his good friend Harold Higgins Swift (a collegemate though not a classmate), he began to learn about hogs; but when he found them not to his liking he quit Swift & Company and started to learn about stocks and bonds, even though the salary was lower and no Swift-like friend was in the investment business.

Like Mr. Glore, Marshall Field III looks absurdly young. And, as a matter of fact, he is only thirty-six. Because his father left him one of the largest fortunes in the United States, it has been easy now and again for the public to imagine that his participation in such enterprises as Field, Glore & Co. consisted of merely supplying the capital. Such, however, is not the case. His interest has been both active and enthusiastic.

Like Mr. Glore, too, Mr. Field has the rare and valuable quality of being able to amuse himself. His estate at Lloyd's Neck, Long Island, is known by meticulous sportsmen throughout the world for its pheasant shoots, perhaps the best in the country. Here, too, he has his indoor and outdoor tennis courts, his swimming pool, and the other pleasurable accoutrements of a large estate. His reading is voracious and haphazard. Smart, always well dressed, and cheerful, Marshall Field III is one of the country's best examples of the happily balanced millionaire who knows how to avoid the dullness bred of too constant work, but who, withal, will never be too rich *not* to work.



*It
had to be good
to get where
it is*

Drink
Coca-Cola
Delicious and Refreshing

At Princeton
they call it "Poler's Recess"
—but it means *the pause that refreshes*

NIGHTS when everybody is studying for examinations, the 9-o'clock bell of Old Nassau signals "Poler's recess." Study stops, and for a few minutes the quiet campus breaks into noisy, happy activity. Favorite fountains on Nassau Street fill with groups—to relax in good fellowship, to *pause and refresh themselves* with ice-cold Coca-Cola. Then back to study with a fresh start. » » » Other

nights throughout the year there's another traditional break in routine—visits to the "jigger-man" at the gate with his cart of bacon buns and ice-cold Coca-Cola. » » » Thus does the world outside learn from happy youth how to enjoy *the pause that refreshes*. That tingling, delicious taste and cool after-sense of refreshment make Coca-Cola the favorite drink everywhere.

THE BEST SERVED DRINK IN THE WORLD
A pure drink of natural flavors served ice-cold in its own glass and in its own bottle: The crystal-thin Coca-Cola glass that represents the best in soda fountain service. The distinctive Coca-Cola bottle you can always identify; it is sterilized, filled and sealed air-tight without the touch of human hands, insuring purity and wholesomeness. The Coca-Cola Company, Atlanta, Ga.

LISTEN IN—Grantland Rice—Famous Sports Champions—Coca-Cola Orchestra
—Wed. 10:30 to 11 p. m. Eastern Daylight Saving Time.—Coast to Coast NBC Network

NINE MILLION A DAY

Research is the genius



of modern business. Today and tomorrow offer rich reward to those who are willing to search for the better machine—the simpler method—or the new process which converts waste material into a serviceable product. The Rand Laboratories, Incorporated, is a group associated for industrial research.



RAND LABORATORIES INC.

A unit of THE RAND COMPANIES
RAND TOWER, MINNEAPOLIS

Cheap & Smart

[Continued from page 86]

package must be brought back to the store. Since it costs Macy's about thirty cents to deliver a package, C.O.D. deliveries can roll up a good-sized dead loss item. In the D.A. Macy's has developed a unique and highly satisfactory solution of the cash-down problem. The D.A. Department is a private bank operating under the New York State banking laws, with 61,000 active depositors, who are also active Macy customers. The workings of the D.A. are simple: the customer deposits his money, any sum from \$1.00 upward, and then charges his purchases in the store up against his deposits in the D.A. He gets 4 per cent interest on his minimum balance each month, and at Christmas time a bonus of about 2 per cent of purchases made during the year and charged to D.A. This last, however, is not guaranteed.

But the most striking evidence of progress at Macy's is the past history of the store. It was established in 1858 by Rowland H. Macy, a hard-driving Yankee merchant and sea captain, who pushed his store into prominence before he died. From the first he sold for cash only. After his death, partners carried on the business in its rambling block of buildings at Fourteenth Street and Sixth Avenue. They were indifferently successful, for Macy's bore the marks of no genius like A. T. Stewart or John Wanamaker. At last, in 1888, Macy's received

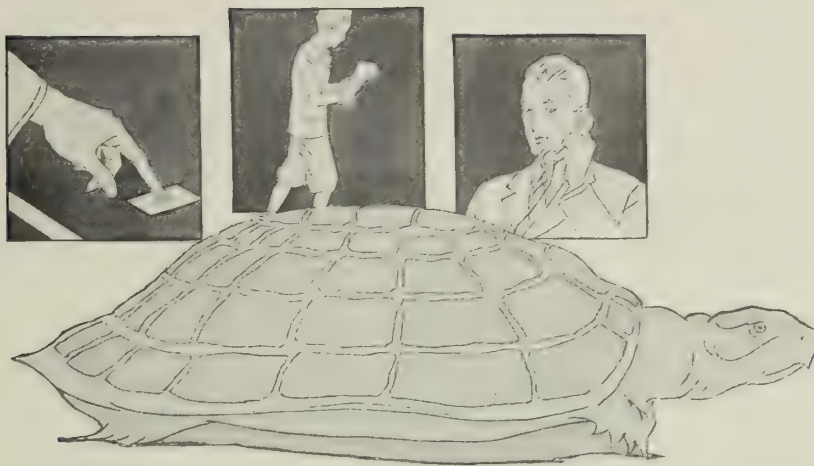
its share, and more, of merchandising talent: Lazarus Straus, from Georgia, and his two sons, Isidor and Nathan, bought out the partners' interest. The Brothers Straus had started as tenants in the basement, where they had run a china shop with success enough to buy out the entire store. Under the Straus brothers, chiefly Isidor—for Nathan soon went off and became a partner in Brooklyn's Abraham & Straus—Macy's prospered so greatly that in 1902 the store was moved uptown to its present site on Herald Square. But all this time and for many years after 1902, Macy's, lusty and thriving as it was, held a humble position in the hierarchy of New York stores. Stewart's and Wanamaker's, and later, Altman's, Lord & Taylor's, Best's—these were the stores that were graced by the "carriage trade" of those times.

Macy's has been getting its share of "carriage trade" in more recent times. One day last fall it was found that out of 476 private cars that drove up to Macy's, the four leading makes were Packard (104), Cadillac (76), Lincoln (72), and Pierce-Arrow (47). The Ford was ninth on the list. In the old days the thousands who jammed Macy's were frankly bargain hunters. The store was cheap, and little more. Today Macy's is still cheap. But Macy's is also smart. And in arriving at this happy paradox, the store has contributed a notable chapter to the history of merchandising.

CHRISTMAS AT MACY'S

There is Christmas at Sea, Christmas in the Mining Camp, Christmas on the Old Homestead (after the arrival of Roger with the Mortgage Money), but what of Christmas in a Department Store? The Season brings to Macy's a good part of its annual profits nicely wrapped up in such phenomena as these:

121,000 dolls sold
5 tons of plum pudding sold
1,250,000 cash transactions a week as against a normal 567,000
A clerk behind every 30 inches of the novelty jewelry counters
27,000 people riding on 5 escalators from the street floor to the second floor in one hour
8,000 questions a day asked of, and answered by, a single information clerk
10 times the normal trade in fine jewelry
8 times the normal trade in handkerchiefs
6,000 pedal automobiles sold
101,390 parcels delivered in one day
3 tons of pennies bought by Macy's from the U. S. Treasury each week
13,500 employees as against a summer pay roll of 8,100



T-O-O S-L-O-W

Lightning Fast

DOES your overhead statement show an "Executive Waiting Time" item? No matter *what* it's called, the cost is on your books.

You can't confer with a member of your staff unless you wait. You press a buzzer . . . and *wait*. You summon and send a messenger . . . and *wait*. You pick up your 'phone for an inside call . . . and *wait*.

Once those were best ways. Now they're out of date . . . *Too slow!*

The DICTOGRAPH SYSTEM OF INTERIOR TELEPHONES saves the minutes that add up to hours and days—time that you must pay for, whether it earns a profit or pleads guilty to a loss . . . DICTOGRAPH knows no waits. You flick a key and speak quietly toward a microphone in the little instrument across your desk. The responding voice comes to you distinctly, *naturally* from its loud speaker.

DICTOGRAPH places you in immediate conversational contact with any member of your staff at any minute of the day. No one wastes a moment in walking from one office to another. The telephone switchboard is cleared of the confusing burden of "inside calls." Business is conducted with



greater speed and concentration, greater accuracy and comfort. Time and energy wasted by old-fashioned methods of communication are turned into *profit!*

It will take only a few moments to show you DICTOGRAPH in actual operation on your desk—at no obligation to you . . . Consult the telephone directory for our address in your city. Or write to DICTOGRAPH PRODUCTS CO. INC., 226 West 42nd Street, New York City.

DICTOGRAPH
SYSTEM OF INTERIOR TELEPHONES
The Modern Miracle of Business





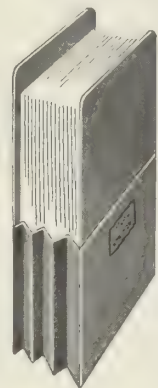
Take No Chances

with folders like these. Lost or misfiled papers can cause important business losses—files with bulging, flat folders like those pictured above cause a steady operation loss, as well as being a constant source of annoyance and inconvenience. Flat folders were never intended to contain many papers or for continued use.

Vertex

FILE POCKETS

on the other hand are firm, durable, expansible filing containers that can be used in any vertical filing system. They will not slump in the file, but stand erect with their index tabs in plain view; will hold three or three hundred letters with equal facility; are easy to remove or replace in the file; save time in daily finding and filing of papers, and improve instantly the efficiency and appearance of the drawer.



Stop using flat folders. Start now with a free sample "Vertex" File Pocket and know filing satisfaction. Use the coupon below. (This offer is naturally limited to those having or using vertical files.)

CUT HERE

Please send me for trial in my files a free sample of the Bushnell Paperoid "VERTX" File Pocket as described in May, 1930, Fortune.

Name of Firm.....

Address.....

Name and Position of Person Inquiring.....

Letter Size or Legal Size Desired?.....

To ALVAH BUSHNELL CO., Dept. F
13th & Wood Sts. Philadelphia, Pa.

Fortune

SUBSCRIPTION DEPARTMENT
350 East 22nd Street, Chicago, Illinois.

Enter my Subscription for FORTUNE for one year and send me a bill for \$10.

Name

Address

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of Fortune, published monthly at New York, N. Y. for April 1, 1930.
State of New York
County of New York ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Henry R. Luce, who, having been duly sworn according to law, deposes and says that he is the General Manager of Fortune, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Time, Incorporated, 205 East 42nd St., New York, N. Y.; Editor, Henry R. Luce, 205 East 42nd St., New York, N. Y.; Managing Editor, Parker Lloyd-Smith, 205 East 42nd St., New York, N. Y.; Business Manager, Henry R. Luce, 205 East 42nd St., New York, N. Y.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Time-Fortune Corporation, 205 East 42nd St., New York, N. Y.; Time, Incorporated, 205 East 42nd St., New York, N. Y.; Robert A. Chambers, 100 East 42nd St., New York, N. Y.; Harry P. Davison, Jr., 23 Wall St., New York, N. Y.; John H. Griffin, Argus Publishing Company, Albany, N. Y.; William V. Griffin, 70 Broadway, New York, N. Y.; Crowell Hadden III, 43 Exchange Place, New York, N. Y.; Edith H. Harkness, 4 East 66th St., New York, N. Y.; Edward S. Harkness, 654 Madison Ave., New York, N. Y.; William H. Harkness, 15 Broad St., New York, N. Y.; Louise H. Ingalls, Navy Building, Washington, D. C.; Robert L. Johnson, 205 East 42nd St., New York, N. Y.; Roy E. Larsen, 205 East 42nd St., New York, N. Y.; Wilton Lloyd-Smith, 63 Wall St., New York, N. Y.; Henry R. Luce, 205 East 42nd St., New York, N. Y.; John S. Martin, 205 East 42nd St., New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders, owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise to paid subscribers during the six months preceding the date shown above is..... (This information is required from daily publication only.)

Sworn to and subscribed before me this 20th day of March, 1930.

HENRY R. LUCE, General Manager.

Chas. W. Abbott.

(My commission expires March 31, 1931.)

Ah! A BIRD SANCTUARY

Birds add untold interest and pleasure to any grounds or estate. Learn how to attract only beneficial song birds who thank you not only with cheery songs, but by destroying harmful insects, moths and mosquitoes. A Martin colony, for instance, will keep your premises free from mosquitoes and other flying insect pests.

JOSEPH H. DODSON, America's foremost bird authority, has supervised the building of bird sanctuaries for prominent people like Henry Ford, John D. Rockefeller, Thomas Edison, Harvey Firestone, Drs. Mayo and others as well as country clubs such as Westchester Biltmore, Olympia Fields, Onwentsia, etc.



Joseph H. Dodson

He will be glad to hear from any home owner interested in helping preserve America's song birds and to confer personally regarding the construction of a sanctuary or the proper location of bird houses on your property. Even a small garden can be made a haven for our beautiful birds. Write Mr. Dodson today and learn how to attract birds to your premises this season.

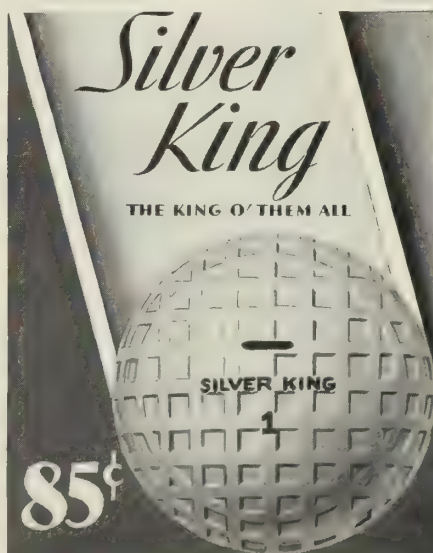
JOSEPH H. DODSON, INC.
239 Harrison St., Kankakee, Ill.

A Book Will Be Sent to Those Interested—
"Your Bird Friends and How to Win Them."

John Wanamaker NEW YORK

Sole United States distributors for
the Silvertown Company, London

New York Boston Philadelphia
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This beautiful "Lincraft" Post-and-Rail Fence—11 ft. rails, 65 cents each; posts 95 cents and \$1.00 each

Send for "The Book of Fences"

describing Lincraft Rustic Fences, as installed on some of America's most beautiful estates and suburban properties. The Lincraft Line includes Post-and-Rail, English Hurdle and Woven Fences, both hand and machine, sturdily constructed of seasoned, weather-resisting woods. A Lincraft Fence requires no painting, and age only adds to its beauty. It is economical in first cost, installation and up-keep.

LINCRAFT RUSTIC FENCES

NEW JERSEY FENCE COMPANY
34 LOGAN AVE. BURLINGTON, N. J.

JOHN HANCOCK SERIES

Building an Estate

What can be done
with Life Insurance

TO plan and build an estate of substantial size is a serious and often a lifelong problem.

Is the estate you will leave sufficient to do for your family all you would like? If not, do you know how you can increase it immediately? How you can make sure of leaving them enough money for their needs?

Through Life Insurance, with a comparatively small annual premium, you can build an estate of substantial size and effectiveness, —the proceeds payable at whatever time and in whatever manner you designate.

If interested, cut this out, write your name across it, mail to Inquiry Bureau, 197 Clarendon Street, Boston, Mass., and receive our booklet, "This Matter of Success."

John Hancock
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS
197 Clarendon St., Boston, Mass.

Over Sixty-seven Years in Business

These Pictures Show How

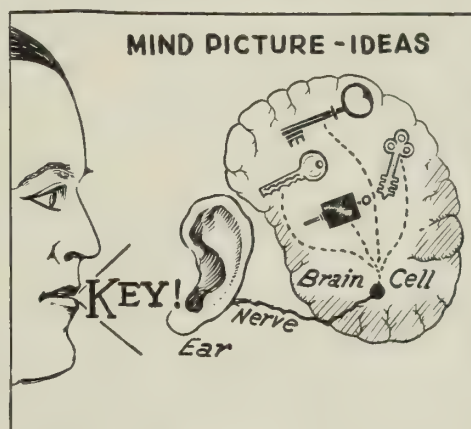
NEW-TYPE BUSINESS MOVIES

Send Your Selling Story Into a Buyer's Brain *Without Confusion*

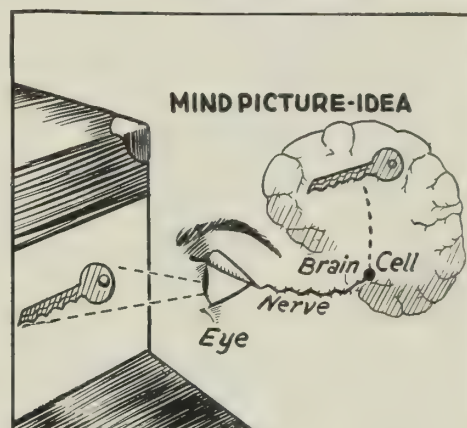
Scientific Explanation of the Workings of the Human Brain's 9,000,000,000 Cells Reveals EYE-WAY as Shortest, Quickest, Surest Route to Order-Writing

An Amazingly Simplified Selling Method That Enables Your Salesman to Get and Hold a Buyer's Attention. And—to Start Off on the Right Foot When He Begins to Present Your Sales Proposition

Developed from Finding that Pictures-in-Motion are Far Superior to Words in Building Dominant "Buying Idea" About Your Product or Service in Prospect's Mind, New-Type Business Movies Speed Up Selling Remarkably



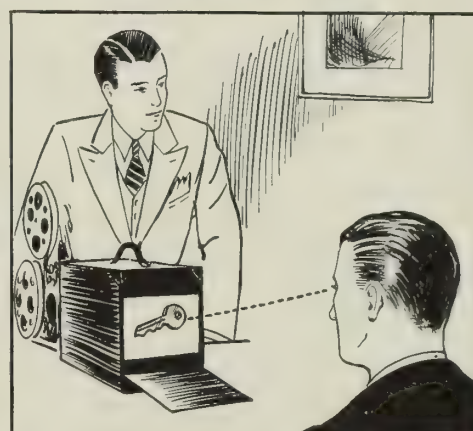
EAR-WAY is Confusing



EYE-WAY is Clear



TALKING Slows Down Sales



MOVIES Speed Up Sales

KNOwn by every salesman—the easiest way to start a sale is to get the buyer believing he knows the product...thinking he knows all the reasons why it is a good "buy".

For, in that frame of mind, a buyer is not afraid of losing face in the salesman's eyes by betraying ignorance of the product. He's ready to talk buying.

Unknown by every salesman—how to get the average salesman to put complete buying information about the product into a buyer's brain without confusion? In a few minutes? Without skipping part of the story? Before starting to sell?

Science offers a simple solution.

What It Is

Science reveals that *hearing* even a simple word like "key" causes the ear-nerve-brain cell system to bring to mind all the most familiar types of keys.

On the other hand, *seeing* a photograph of a key causes the eye-nerve-brain cell system to put into mind the exact image of that particular key *only*.

Thus, the shortest, quickest, surest of routes to the human brain's 9 billion cells is the *EYE-WAY*. It's the simplest way to sell—with the New-Type Movie.

How The New-Type Movie Simplifies Selling

To successfully build in a buyer's mind a complete

panorama of buying idea-pictures which shows exactly what your product is and how it will prove advantageous to him, the New-Type Business Movie reveals each picture in its proper idea-relation to the one immediately preceding.

In other words, the technique of the Master Salesman is the technique of the New-Type Movie. It presents instantly understandable ideas in picture form in a way so that when they are flashed on a screen before a buyer they travel one after the other, like freight cars going into a tunnel, through his eyes to his brain.

Thus, the one quick way to a buyer's brain...the way that does not confuse...the *EYE-WAY*...is easily and surely gained by this step-by-step, confidence-building pictures-in-motion method.

New-Type Movie Developed By Pathéscope

Pathéscope offers you a "star" movie that not only presents your product to buyers in the same manner that your star salesman has developed from years of experience, but with the clearness of photography, the forcefulness of logic, the persuasiveness of the action in demonstrations, and the glamour of showmanship.

A Complete Professional Service

Pathéscope is equipped to plan and produce your New-Type Selling Movie from scenario to finished

Business Movies Save Time, Money Get Interviews For Salesmen Now

A salesman meets a buyer. The salesman sets out to "sell". The buyer, to keep from being sold. Result—Conflict.

Antagonism removed, selling is easy. Simple to do this way.

Focus the buyer's attention on a "third party"...a movie projector. Let him see a New-Type Movie that gives your selling story up to the point of actually talking terms and prices with perfection never before possible.

Thus, by getting and holding the buyer's favorable attention, your salesman is able to start off on the right foot when he begins to present your sales proposition. First call sales increase—time saved. Travelling expenses drop.

And remember—buyers are glad to see the man with movies. Seeing is believing. They'd rather look than listen.

film. Directors, trained in the specialized problems of business movie-making, work closely with clients at every step.

The cost of a film is moderate. We would be pleased to plan a scenario for you and submit an estimate. No obligation, of course.

SEND NOW FOR COMPLETE INFORMATION FREE

THE PATHÉSCOPE CO. OF AMERICA, INC.
35 West 42nd St., New York

Kindly send me complete information about the new-type business movie. No obligation, of course.

Name.....

Company.....

Street.....

City.....State.....

THE PATHÉSCOPE CO. OF AMERICA, Inc.
Producers and Distributors of Business Movies: Sound, Silent and Still Picture Films



GOOD NIGHT



The
Book-Cadillac Hotel
DETROIT

Good night

Goodmorning, Lady, we are glad you came. You promised for many moons that someday you'd come to find the meaning of "softest, sleepiest beds in all the world." Now, you're here. We're glad. Last night, when you first glimpsed your room, with both bed lamps lighted, with straying night winds singing outside, with the warm fluffy bed covers on both beds turned back, *were you pleased?* When you stayed awake a bit after he had gone to sleep, was it to worry a little over the marking of the milk ticket back home or did you stay to breathe an extra special prayer for the youngsters? Now we've wakened you, for it's breakfast time. Tell us what you want. Grapefruit, sweet and sour, delicious? Hot, butter-melting, crusty, yellow waffles? Maple syrup that pours and tastes like old gold? Coffee? Toast? Lady, dear, for a smile from you (and from him) we'd tumble a mountain down.

The
Book-Cadillac Hotel

ON WASHINGTON BOULEVARD
THE STREET OF FINE SHOPS

DETROIT

CARL M
SNIDER



MANAGING
DIRECTOR

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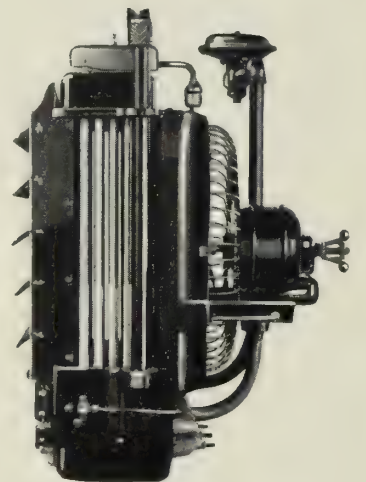
CHECK

✓ Hundreds of industries testify to the advantages and economies of unit heating. A sound theory has become a general practice.

... AND DOUBLE CHECK

Gas-fired unit heaters are superior because they provide greater efficiency, flexibility and economy.

The
Humphrey
Gas UNIT HEATER



Humphrey Gas Unit Heaters provide instant, controllable heat where and when it is needed . . . eliminate coal, smoke, dust, central heating plants and their attendant labor . . . actually pay for themselves in increased heating economy and efficiency. Our heating engineers are valuable men to talk with . . . inquiries invited . . . write for catalog.

GENERAL GAS LIGHT CO.

KALAMAZOO, MICHIGAN

New York Pittsburgh Cleveland San Francisco



Seventeen Humphrey Gas Unit Heaters are all that are required to efficiently heat the mammoth Fairground Auditorium at Billings, Montana. The above photo shows a few of the installations (circled) which take up neither valuable wall nor floor space.

Why one great



Manufactured Weather maintains comfort for patrons . . . induces mutual courtesy and good will . . . stimulates sales.

HUDSON Stores in Detroit invested that much money to make their customers and salespeople more comfortable. To make "Every day a good day" in their stores regardless of unpleasant outdoor weather.

This was not a single plunge into a questionable venture. In 1925 Carrier Engineers installed Manufactured Weather for the two basements and the street floor. It proved spectacularly successful.

Then in 1929 the store was practically doubled in size. Having learned the advantages of Manufactured Weather, the management again called in Carrier Engineers. This time to provide one of the most extensive air-conditioning systems ever built.

Hudson Stores now have Manufactured Weather in the four basements—one below the other—in the street floors, the mezzanines and the dining rooms.

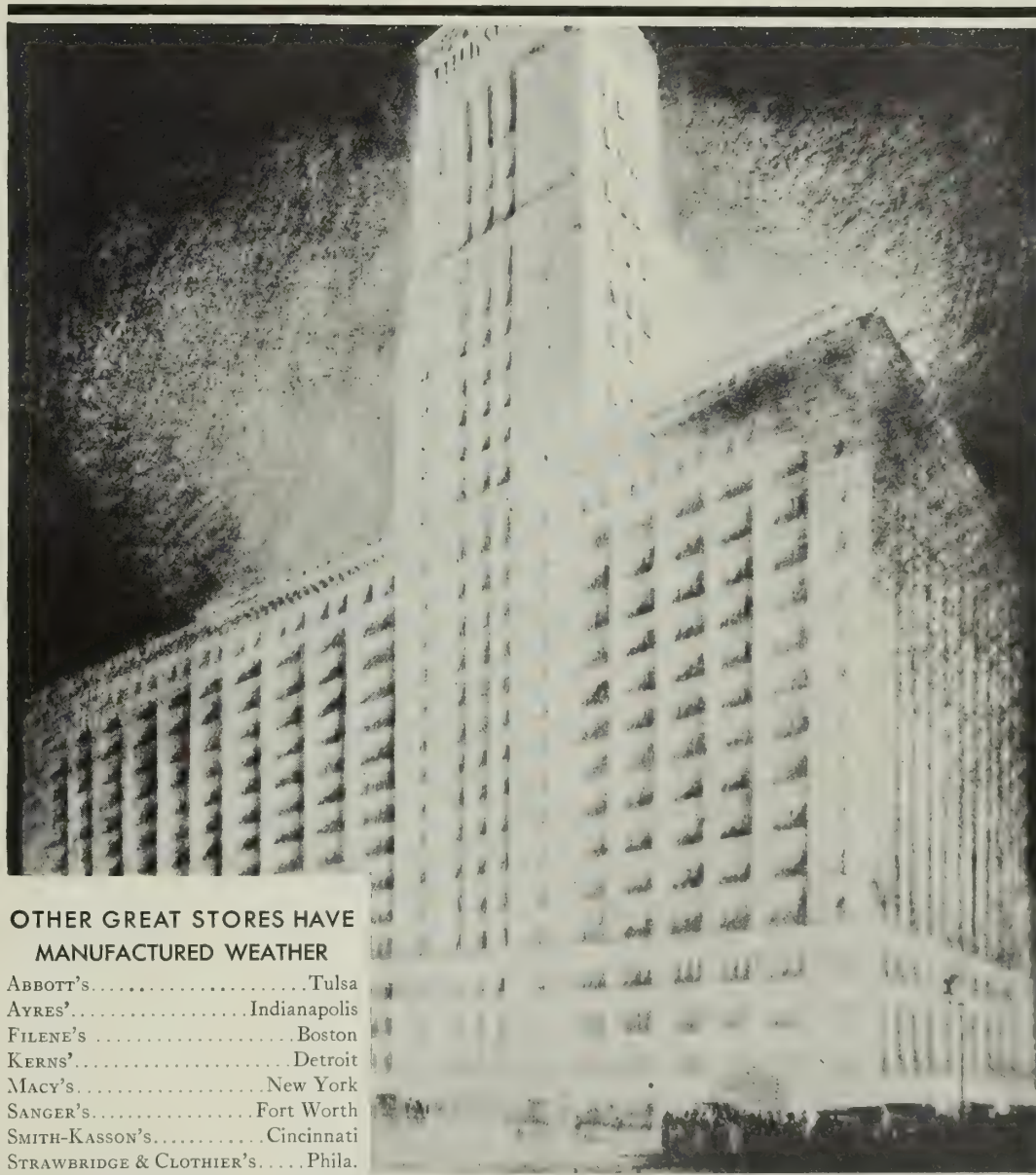
Thousands of shoppers throng their aisles. They come and go. They leave more refreshed than when they entered.

Patrons, stepping from the muggy humidity of a summer day into the cool and refreshing air of this great store, are instantly revived. Hurrying out of a bitter winter storm into fresh air that is warm without being stuffy . . . without a suspicion of draft . . . they are immediately comfortable.

Executives claim that increased patronage alone will pay for the installations.

Carrier Systems can be designed for the smallest shops or the largest buildings. Your buildings, or any part of them, can be made more profitable with Manufactured Weather. A letter to our Newark, N. J., office will bring you a Carrier Engineer who has specialized in your field. There is no obligation.

Department Store spent \$1,000,000 for Manufactured Weather



OTHER GREAT STORES HAVE MANUFACTURED WEATHER

ABBOTT'S.....	Tulsa
AYRES'.....	Indianapolis
FILENE'S	Boston
KERNS'.....	Detroit
MACY'S.....	New York
SANGER'S.....	Fort Worth
SMITH-KASSON'S.....	Cincinnati
STRAWBRIDGE & CLOTHIER'S.....	Phila.
TITCHE-GOETTINGER'S.....	Dallas

Drawn by Hugh Ferriss

Smith, Hinchman and Grylls, Engineers and Architects.

Carrier Engineering Corporation

NEWARK, NEW JERSEY

OFFICES: NEW YORK, PHILADELPHIA, BOSTON, CHICAGO, CLEVELAND, WASHINGTON
DETROIT, KANSAS CITY, DALLAS, LOS ANGELES

Manufactured Weather makes "Every day a good day"

CARRIER ENGINEERING CO., LTD.

LONDON, PARIS, BOMBAY, CALCUTTA, JOHANNESBURG

CÄRRIER LUFTECHNISCHE GESELLSCHAFT

STUTTGART, BERLIN

Bad Air Says: "LET'S POSTPONE THIS UNTIL TOMORROW"



Electric Ventilation Says: "WHAT'S THE NEXT ITEM OF BUSINESS?"



• B A D • A I R • I S • B A D • B U S I N E S S •

You'll never realize the value of Electric Ventilation - until you have it

RUN down, drowsy, exhausted? . . . *try Electric Ventilation.* Half-sick, sleepy, tired? . . . *try Electric Ventilation.* Troubled with afternoon fatigue, smoking bother the eyes? . . . *try Electric Ventilation.* Easily irritated, careless, crabby? . . . *try Electric Ventilation.* Because Electric Ventilation (fresh air — changed at regular intervals) is as necessary to good health and good work as pure food and water. With American Blower equipment, Electric Ventilation for offices, stores, restaurants, theatres, factories and similar businesses can be installed at a cost comparable to that of good lighting equipment. Call in the nearest American Blower authorized dealer — have him give you a ventilation survey of your business . . . tell you how easily and economically he can apply Electric Ventilation . . . or get in touch with the nearest American Blower Sales and Engineering Branch Office.

AMERICAN BLOWER CORPORATION, DETROIT, MICHIGAN
CANADIAN SIROCCO CO., LIMITED, WINDSOR, ONTARIO
BRANCH OFFICES IN ALL PRINCIPAL CITIES

(1000)

American Blower
"Sirocco" VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT
MANUFACTURERS OF ALL TYPES OF AIR- HANDLING EQUIPMENT SINCE 1881

Ten Dollars a Year



PAINTED TRAILS



Thousands of miles of highways are painted to make our traffic safer. More miles are added every day at a cost of from \$25 to \$50 a mile. Like the cars that travel them, many of these highways are painted with nitrocellulose lacquer, because it dries more quickly than other materials and is highly resistant to wear.

These same properties, quick-drying and toughness of film, make nitrocellulose lacquer the most satisfactory finish for thousands of articles varying from fish hooks to fire engines. Lacquer has other advantages, however. It is waterproof, and can be cleaned readily with soap and water. It is easily applied to wood, metal, plaster, textiles, floor and wall coverings, and other surfaces. It is made transparent and invisible or in beautiful opaque colors. Special solutions of nitrocellulose are excellent adhesives, and stiffeners for fabrics.

In the last three years consumption of nitrocellulose lacquer and solutions has more than doubled, principally because manufacturers are constantly finding new applications for it that reduce their costs and improve their products. Lacquer is sold by paint, varnish and lacquer manufacturers. They maintain research laboratories to aid in developing new uses for this product, and it may pay you to consult those who supply your finishing materials.

We will gladly send you a booklet, *The Story Of Modern Lacquer*, if you will write for it on your business stationery.

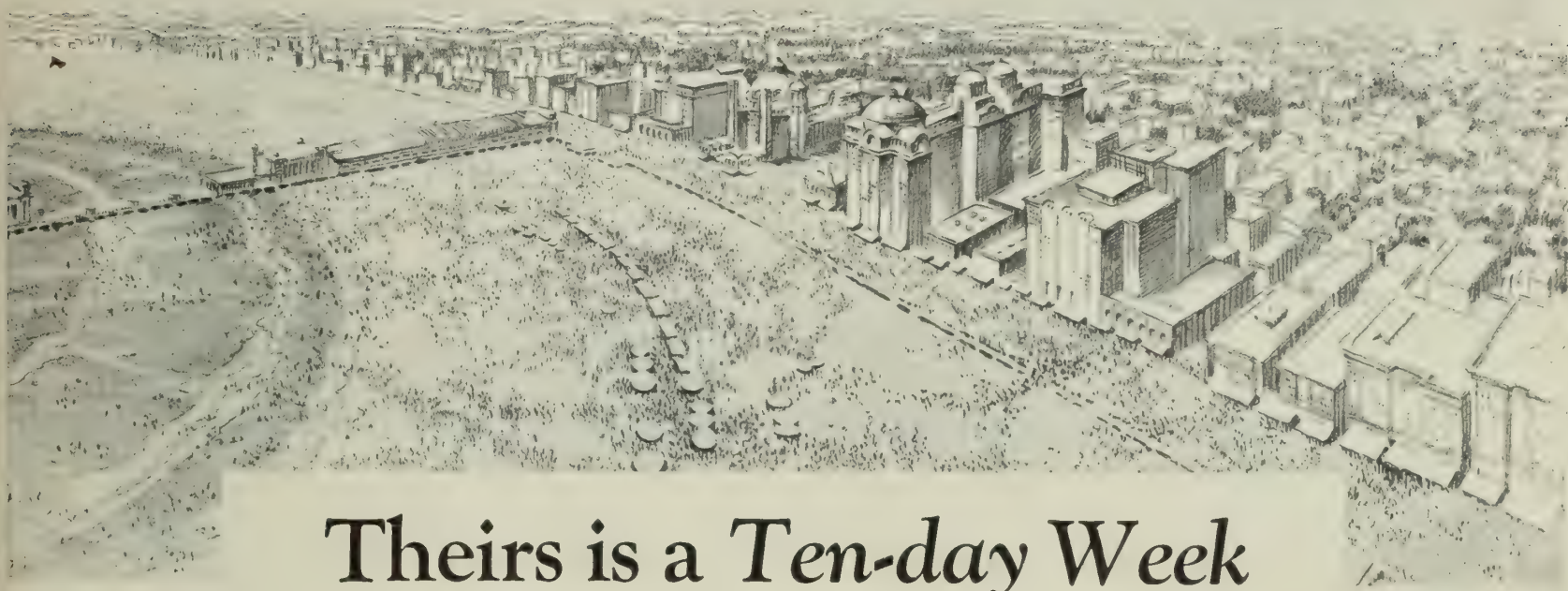
The Hercules Powder Company does not manufacture lacquer, celluloid, or other pyroxylin products. We produce nitrocellulose from which these materials are made.



CELLULOSE PRODUCTS DEPARTMENT
HERCULES POWDER COMPANY

986 KING STREET, WILMINGTON, DELAWARE

NITROCELLULOSE COTTON CELLULOSE NAVAL STORES EXPLOSIVES



Theirs is a *Ten-day Week*

THE five-day week may be the thing for labor, but what most executives need today is a ten-day week. A conference in Toronto, an appointment in Wheeling, W. Va., the weekly meeting of the factory committee in Evansville, Ind., a three-day trade convention at Atlantic City. Now it can be done, easily, comfortably, in one week—the new Travel Air ten-day week for major executives.

✓ ✓ ✓ ✓

An increasing number of progressive concerns are using the six-passenger Travel Air cabin plane to transport

their directors and executive officers on missions of importance. Swiftly and safely, Travel Air carries them cross country with a minimum of time out for travel. Powered with a 300 h. p. Wright Whirlwind engine, this luxuriously furnished monoplane has a cruising speed of 110 m. p. h., a range of 430 miles. Another model, powered with a 420 h. p. engine, flies even faster and farther.

✓ ✓ ✓ ✓

No matter where their business may take them, owners of Travel Air planes have the great advantage of never being far from the service facilities of Travel

Air distributors and Curtiss-Wright airports. Over forty of these landing fields are strategically located throughout the country.

✓ ✓ ✓ ✓

Cost of operation. Tabulations of the cost of operating business planes, based on actual experience of prominent firms, will be supplied to interested executives. For these, and for full information regarding the performance of Travel Air planes, write department T-1.

TRAVEL AIR COMPANY
Division of CURTISS-WRIGHT
27 WEST 57TH STREET, NEW YORK

A PLANE FOR EVERY PURPOSE **TRAVEL AIR**

1880

GOLDEN
ANNIVERSARY
YEAR

1930

DAVEY TREE SURGERY



Reproduction from a color photograph made on the estate of Walter P. Chrysler, Great Neck, Long Island, New York, by Wilfred O. Floing

© The D. T. E. Co., Inc., 1930

1,000 high-type scientifically trained experts serve Davey clients

JOHN DAVEY struggled through the first 21 years with only a few helpers in the practice of his new science of tree surgery. Then in 1901 he published his first book, "The Tree Doctor," illustrated largely with photographs made by his own hands.

From this point on, there was a gradual growth against difficult odds in the development of the human organization that was to carry on his work. Aside from the ordinary problems of developing a new business, there was the unusual task of pioneering a new idea.



JOHN DAVEY
1846-1923
Father of Tree Surgery
Reg. U. S. Pat. Office

Gradually his organization grew to the point where his trained men must operate beyond his personal supervision. A resident school was necessary to give scientific training. And in the fall of 1908 there was established the Davey Institute of Tree Surgery, which remains to this day the only school of its kind in the world.

There are now 1,000 Davey Tree Surgeons carefully selected, trained scientifically. The entire organization includes some 1,300 people and did a business in 1929 of \$3,250,000, serving 22,368 clients from Boston

to beyond Kansas City, and between Quebec and the Gulf.

Send for nearest Davey representative to examine your priceless trees without obligation. Any necessary work will be done at reasonable cost. Davey service is local to you—Davey Tree Surgeons live and work in your vicinity. Write or wire Kent, Ohio, or telephone nearest branch office.

Tune in Davey Tree Golden Anniversary Radio Hour

Every Sunday afternoon, 5 to 6 Eastern time; 4 to 5 Central time; over the Red Network National Broadcasting Company. Featuring the old-time songs that everyone knows and loves. Listen to Chandler Goldthwaite on the Skinner Residence Organ.

THE DAVEY TREE EXPERT CO., Inc., 402 City Bank Bldg., Kent, Ohio

MARTIN L. DAVEY, President and General Manager

Branch offices with telephone connections: Boston, Springfield, Pittsfield, Providence, Hartford, Stamford, Westport, Conn., New York City, White Plains, Patchogue, L. I., Hempstead, L. I., Albany, Syracuse, Rochester, Buffalo, Toronto, Montreal, Orange, N. J., Ridgewood, N. J., Philadelphia, Adlington, Pa., Germantown, Pa., Baltimore, Washington, Pittsburgh, Cleveland, Toledo, Columbus, Dayton, Cincinnati, Indianapolis, Louisville, Paducah, Ky., Detroit, Grand Rapids, Chicago, Oconomowoc, Wis., Minneapolis, Des Moines, St. Louis, Kansas City, Mo., Tulsa, Okla., New Orleans, Memphis, Nashville, Atlanta, Charlotte, N. C.

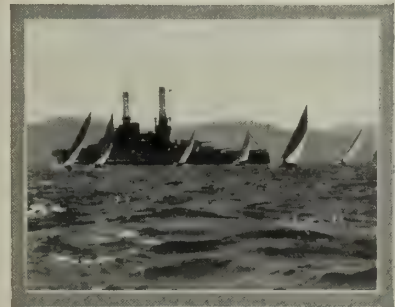
Summer in the California that's centered by San Francisco —



Where thousands came once to visit and returned again to live as they had only dreamed of playing—there surely you'll enjoy this summer.

California. One day's lure is high-hilled San Francisco—the next your choice of half a hundred other places,

Awahnee Lodge at great Yosemite; and from mountain lakes and streams, and Redwood forests; debonair Del Monte — Pebble Beach, where golf is played above a yacht-flecked ocean; and from San Francisco, with its secret of buoyant joyous living.



YACHTING ON SAN FRANCISCO BAY

down beside the sea or thrust by mountains into philosophic skies.

California calls you to a freedom of the body and the mind . . . to a new luxury in rest, a new zest in play. Calls you from the high Sierra with its famous inns—Feather River Lodge, Tahoe Tavern,



San Francisco, America's coolest summer city. Right in the center of this great vacationland and part of it. A



HALF DOME — IN YOSEMITE NATIONAL PARK

worldly cosmopolitan part.

Here is headquarters city for the business of the whole Pacific Coast. Its fabled hills look down upon the towers industry has raised, and the bay within the Golden Gate where all the ships of the world could find shelter at one time.

Beyond, in each direction, much closer than you'd think, you'll find this California's farms and orchards, mines and forests that are its backbone and its strength. You'll see the

clean, bright towns and the streams of motors on the roads that speak its wealth. You'll see its brilliant future, one perhaps you'll want to make your own.

For books of pictures and other information write Californians Inc., Dept. 2206, 703 Market St., San Francisco.

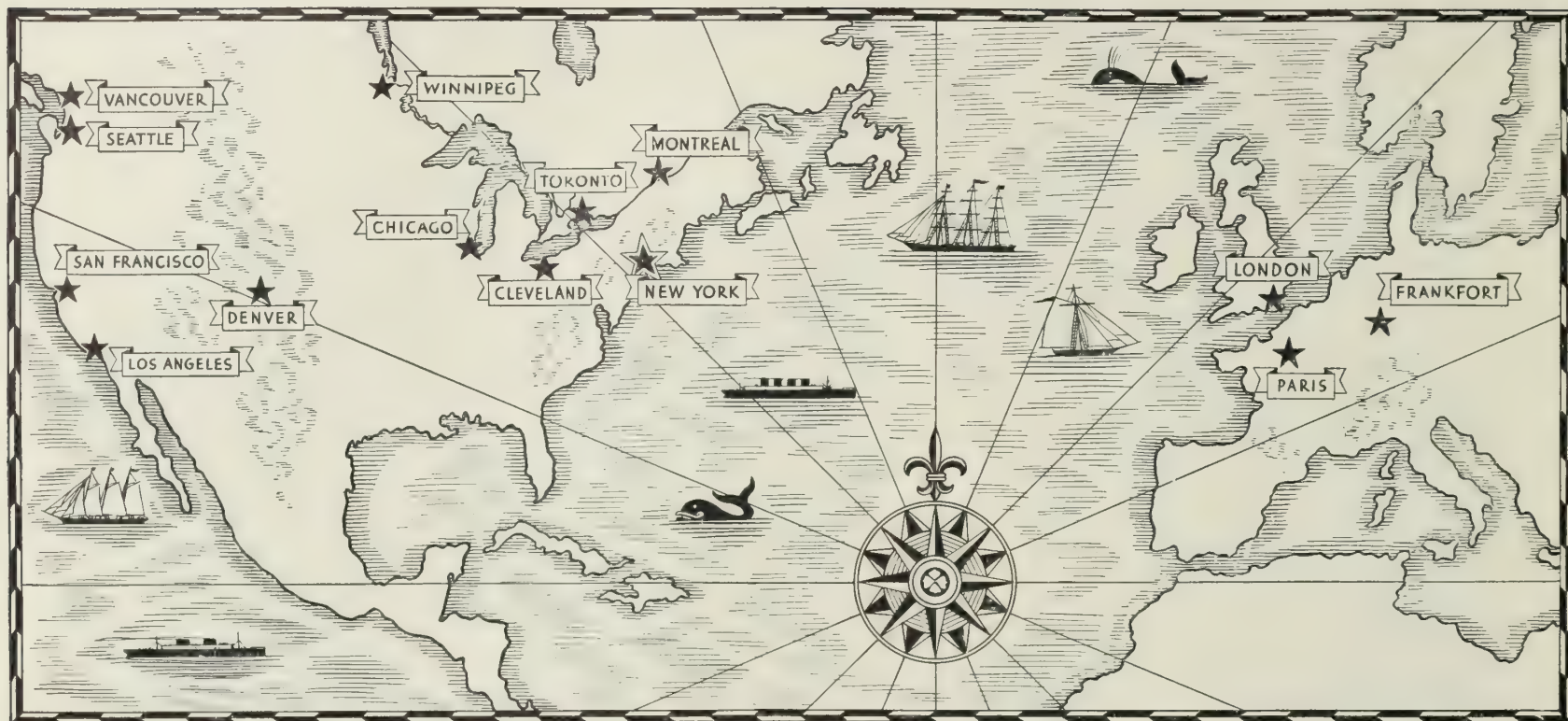


THE WALL STREET OF THE WEST

BURLINGAME
PUBLIC
LIB.

SAN FRANCISCO
IN CALIFORNIA—"WHERE LIFE IS BETTER"

jumping the world's fences



American sales enterprise is hurdling national boundaries and making the whole world its market. It is part of the freer and ever-widening commerce between nations. Long alert to this trend, the McCann Company is continuously studying foreign markets, and has provided facilities for placing advertising in every section of the world. Already we have established complete service organizations of our own at fourteen important marketing centers in the United States, Canada and Europe. Important to every export manager is the American standard of service offered by our European offices. Associated with each office are native advertising men, long experienced in local problems. But the direction is American, and American ideas and methods have as full play as conditions warrant. Each office is equipped to give complete agency service, just as that is understood in the United States—a service characterized by that dispatch, thoroughness and resourcefulness made possible by our far-reaching, yet closely-knit organization.

If you are interested to find in Europe an on-the-spot marketing organization ready to study the sales possibilities of any product, send for the European Service booklet. Foreign Dept., 285 Madison Ave., N.Y.

THE **H·K·McCann**
COMPANY



INTERNATIONAL
ADVERTISING
SERVICE

NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO • LOS ANGELES • SEATTLE • DENVER
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STAMINA

TIRES must have stamina today as never before. Cars are faster and more powerful. Wheels are smaller. Roads are better. Distance is measured in minutes instead of miles. All this subjects tires to greater wear, harder strains, and the faster a car travels the more essential is the need for tires that are dependable and safe. The answer is the new Supreme Balloon, the strongest, toughest, safest tire ever built. Gum-Dipped cord construction, extra rubber between the plies, a broader, thicker safety tread. And new beauty to enhance the finest cars.

Any Firestone Dealer can equip your cars now.

Firestone

Supreme Balloon

BURLINGAME
PUBLIC
LIB.



MOTOR BOATING...the luxury of sport

Whether you view a speeding cruiser from a yacht club dock, or enjoy the exhilaration of gliding, mile after mile, enroute to another anchorage, you can well appreciate that this is traveling with greatest luxury and freedom. Eyes, accustomed to close buildings and shadowy vistas, expand naturally and gaze restfully on blue skies and green-blue water. Each mile of bubbling wake unreels the thread of care you leave behind you.

◀ 12 to 565 HORSE POWER ▶

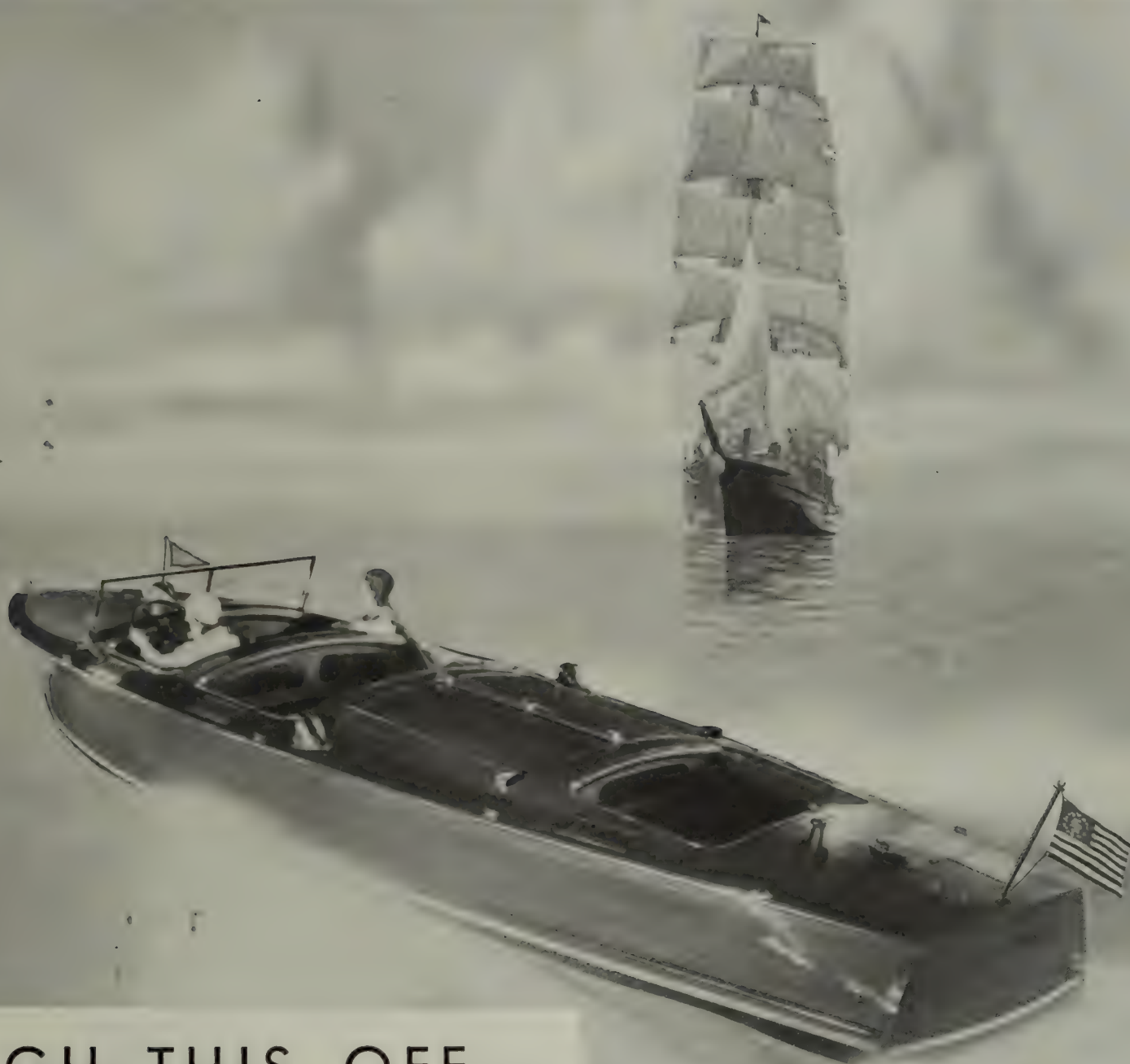
STERLING ENGINE COMPANY

BUFFALO, N.Y., U.S.A.

40-foot, 32-mile
Hydroplane
built by Ditchburn

Powered with Two
150 H. P. Sterling
Petrel Engines





LAUGH THIS OFF— IN A BOAT

It's going to be hot on shore . . . and dusty . . . highways more crowded. Detour signs coming out of winter storage. Rural constables tuning up their motorcycles. Two traffic signals blooming where one was damned but yesteryear.

But on the water—there's freedom—sweet cool breezes—a trackless world of romance and adventure. It's yours—all yours—if you have a boat. A bitter mocker if you haven't.

And if you would enjoy it to the utmost, choose your boat with care. Make certain that you can be proud of the boat you buy, that it will be the envy of all beholders.

We suggest a Gar Wood Boat, for there can be no finer run-about than those created by the Miss America craftsmen, and no other can have such a tradition. You will find among the fourteen new models, just the boat that suits your individual

taste and needs. Open, enclosed or convertible, 22 to 33 feet, 30 miles per hour to 55, \$2,250 to \$12,950, all Gar Wood Boats are built to the same standards of excellence. Famous for their "soft-riding", you will find them equally outstanding in seaworthiness.

You will want that boat mighty soon now. So you may not be disappointed on delivery, we suggest you see the nearest Gar Wood dealer right away or wire us for information.

GAR WOOD INC.

THE GREATEST NAME

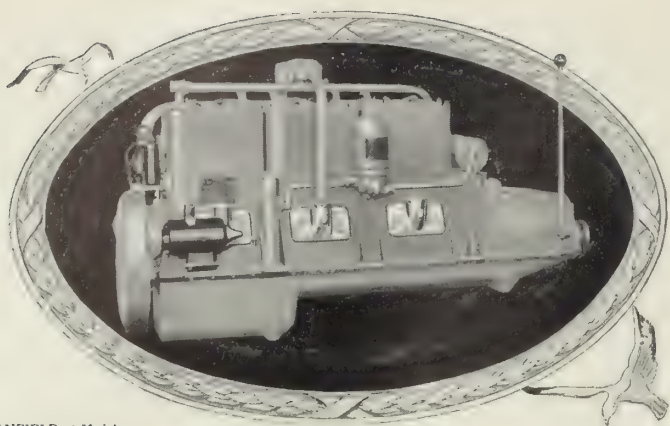


IN MOTORBOATING

206 River Road

Marysville, Michigan

Showroom and Factory Branch, 1868 Broadway, New York City



BANFIELD--6 Models
CHRIS-CRAFT--6 Models
CORSAIR "36"
GARWOOD "40"
HACKERCRAFT*
KING SEA-SKIFFS
KYLE "43"
MATTHEWS*
MINETT-SHIELDS
NORTH STAR
ROBINSON SEA GULL
Twin Installations
SEA LYON "40"*
STEPHENS
WHEELER "PLAYMATES"*
Foreign
BRITISH POWER BOATS
OSBORNE-CRAFT--England
CLAUS CRAFT--Germany
CHANTIERS NAVAL
EXCELSIOR
DESPUJOLS--France
*Optional

DEPENDABLE POWER

The wide acceptance of SCRIPPS motors by so many prominent builders of standardized craft who offer them as standard or optional equipment is significant of SCRIPPS unfailing dependability.

Fifteen models—15 to 200 Horse Power
High speed and medium duty.

Interesting literature will be mailed upon request.

SCRIPPS MOTOR CO., 5844 LINCOLN AVENUE, DETROIT, MICH.

SCRIPPS

• THE MOTOR THAT CROSSED THE ATLANTIC •

Hackercraft

*Still Unbeatable and...
Keener than Ever to Drive*

SEAWORTHY



Hackercraft are hand-built. "Skimping" in materials and workmanship is never practiced in the Hacker Shops to achieve lower prices. Price-cutting sins against quality—and quality is paramount in the boat you buy. Double planked genuine Honduras mahogany bottoms, copper riveted (not screw fastened) give unexcelled durability and greater speeds. Hand finished hulls, genuine (not imitation) leather upholstery with every appointment in keeping with their supreme quality provide you a permanent beauty that remains undimmed by time or rival boats. May we send you our catalog illustrated throughout with actual photographs of Hackercraft in action?

HACKER BOAT COMPANY
548 River Drive Mt. Clemens, Mich.



HACKERCRAFT
AMERICA'S FASTEST SPEED BOATS



Low Priced DeLuxe Cruisers!

THE Single Cabin, Double Cabin and Day Cruisabouts, 29 feet long, are low priced, deluxe cruisers that will take you over the water at speeds up to twenty-four miles an hour. These Cruisabouts have plenty of deck space for carrying large parties without crowding and complete cabin arrangements including toilet room, a complete galley where real meals can be prepared and served, and large, comfortable berths for four or six people.

At \$3585 for the Single Cabin; \$3685 for the Day model and \$4185 for the Double Cabin Cruisabout, these cruisers far surpass all others of equal size, type or quality. Booklet "N" illustrating and describing these jaunty Cruisabouts mailed free on request. Cruisabouts can be inspected at Bruns, Kimball & Co., Fifth Ave. and Fifteenth St., New York City.

RICHARDSON BOAT COMPANY, Inc.
455 Sweeney Street North Tonawanda, N.Y.

Richardson Cruisabouts

CUSTOM BUILT

for
Discriminating
Yachtsmen

Only One Quality!

For three generations yachtsmen of extraordinary taste and judgment have had their yachts built in the ship building yard of M. M. Davis and Son. Have received a most exceptional degree of quality and craftsmanship—a most fair treatment in price. Many have had their second, third and even fourth yachts built here.

Write for list of power and sail yachts we have built.

M. M. DAVIS & SON

For Three Generations
CUSTOM BUILDERS
of fine Sail and Power Yachts

Solomons Maryland

Masterpiece of the Sea

Every yacht built by M. M. Davis and Son is truly a masterpiece of the sea, the work of artist craftsmen, a creation of beauty, grace and seaworthiness.



Chris-Craft 26-ft. Runabout, 250 H. P. Chris-Craft Marine Motor, speed up to 45 M. P. H., \$4750



ROUGHING it has gone out of fashion. Chris-Craft will take you in arm chair comfort at express train speed right into the heart of nature. Enjoyment of the wilderness is no longer confined to those who can carry a pack over rough trails or row a hard seated boat. Even an invalid can go fishing. Seated upon deep, luxurious cushions one may fish or ride by the hour without fatigue. ' ' ' One may explore a hundred miles of coast-line—go swimming—attend an afternoon tea and be ready for the dinner dance—all in the space of an afternoon—and best of all, without fatigue or discomfort. ' ' ' Better to have a Chris-Craft without a summer home than a summer home without a Chris-Craft. All the family will gain health and pleasure from Chris-Crafting, for it provides always something to do and the means to do it with. From nimble seventeen-footer to the luxurious Chris-Craft yacht is a wide range of fine watercraft to suit all needs and tastes. Illustrated catalog may be had from Chris Smith & Sons Boat Co., 126 Detroit Road, Algonac, Michigan.

NEW!

A 17-foot Runabout, 25 M. P. H. priced at \$1295.

Chris-Craft

World's Largest Builders of
Mahogany Motor Boats

Runabouts—Sedans—Commuters—Cruisers—Yachts
25 Models—17 to 48 feet—\$1295 to \$35,000
A FEW DESIRABLE SALES TERRITORIES OPEN.
WIRE FOR DETAILS.

★ ★ another achievement ★ ★ distinctively SPARTAN



WHEN you see the new Spartan C-4-225 you will be impressed with its many refinements of design. This new de luxe cabin monoplane perpetuates the Spartan tradition of constant progress . . . and sets it apart as another achievement distinctively Spartan.

» Spartan offers the C-4-225 with but one regret . . . that its finer details of craftsmanship are not entirely visible. Its trim, clean lines may be seen and appreciated. Its interior arrangement and the comfort of its appointments for four are factors instantly impressive. But its durable, lasting construction, its stability under any condition of flight, its advantages in safety . . . these are qualities fully apparent only when it is called upon repeatedly for extremes of service.

» Spartan Aircraft Company expresses its sincere belief that no cabin airplane today contains more value, dollar for dollar, than the C-4-225. A new booklet showing all Spartan models in natural colors will impress you. A demonstration by a factory representative, which may be arranged without obligation, will convince you. Write today for full information and prices.

The Spartan C-4-225 is powered by the Wright "Whirlwind Seven." Standard equipment includes dual controls, metal propeller, booster magneto, starter, complete instrument panel, oleo gear, Bendix wheels and brakes, adjustable stabilizer, navigation lights. Interior design by Kinnan . . . fittings by Ternstedt . . . broadcloth by Wiese.



SPARTAN AIRCRAFT COMPANY
TULSA, OKLAHOMA

★ ★ ★



If it lifts Cigar Production into the Billions

BURLINGAME
PUBLIC
LIB.

*What might
Manufactured Weather
do for you?*

MACHINE-MADE cigars were virtually an impossibility when weather varied inside the factory.

The machine rolls a perfect cigar. But it makes no distinction about the condition of the leaf. The hand worker can feel when the leaf is ready to roll. The machine simply takes the wrappers as they come. Naturally every wrapper must be in exactly the right condition for rolling.

Now tobacco is extremely sensitive to weather. Let there be too much moisture in the air, and tobacco soaks it up . . . even becomes moldy. If there is not enough, the leaf loses moisture . . . gets dry . . . brittle . . . breaks into scrap in handling. Think what the finished cigar would be were such variations allowed to exist. One smoke dry and acrid . . . the next too damp to draw.

Marvelous as the modern cigar-making machine is, it would fail to give the branded cigar its greatest virtue, uniformity and the certainty of a cool, sweet smoke each time—unless Manufactured Weather came to its aid.

Today Blackstones, Bayuk Philipinas, La Palinas, and dozens of other famous cigars are made in a ceaseless stream . . . each one fresh and perfect. Their total pro-

duction runs into *billions* . . . thanks to Manufactured Weather. Other billions of cigarettes—Camels, Lucky Strikes, Old Golds, Chesterfields—are better because they are made in this conditioned air.

Manufactured Weather is the name given exclusively to the air conditioning systems of Willis H. Carrier and his associates. It is paying its way today in more than two hundred *types* of industries . . . in more than 3,000 installations.

Unsuitable indoor weather may affect your sales or hinder the speed and continuity of production in your business. Or it may vitally influence your own health, comfort and productive efforts and those of your employees. Let us furnish you with the full story of what Manufactured Weather has done in your business field. We suggest that you get in touch with our Newark Offices at once.



ONE MACHINE—THREE GIRLS roll four to five thousand perfect cigars a day with Manufactured Weather in the Blackstone factory.

Manufactured Weather's Directory in the Tobacco Industry

American Cigar Company
American Tobacco Company
Bayuk Cigars, Inc.
Benson & Hedges
British-American Tobacco
Company
Congress Cigar Company
Consolidated Cigar Corp.
De Nobili Cigar Company
Otto Eisenlohr & Brothers, Inc.
General Cigar Company, Inc.
Heber Process Corporation
Industrial Company (Porto
Rico)
Julius Klorfein

Liggett & Myers Tobacco
Company
P. Lorillard Company
Mazer-Cressman Cigar
Company, Inc.
New York & Porto Rican
Steamship Company
Porto Rican-American Tobacco
Company
E. Regensburg Company
R. J. Reynolds Tobacco
Company
Standard Cigar Corporation
P. A. Steber Company
Waitt & Bond, Inc.

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NEWARK, NEW JERSEY

OFFICES: NEW YORK, PHILADELPHIA, BOSTON, CHICAGO, CLEVELAND, WASHINGTON
DETROIT, KANSAS CITY, DALLAS, LOS ANGELES

Manufactured Weather makes "Every day a good day"

CARRIER ENGINEERING CO., LTD.
LONDON, PARIS, BOMBAY, CALCUTTA, JOHANNESBURG

CARRIER LUFTTECHNISCHE GESELLSCHAFT
STUTTGART, BERLIN

Off the Record

Roche of the Coal Mines

THE practical employer's answer to the impractical reformer's suggestions used to be: "Come out here and run my business for me if you know so much about it." It never was said very seriously. But nowadays, out in Colorado, they don't say it at all. They think about Miss Josephine Roche and the Rocky Mountain Fuel Company and the Colorado State Industrial Commission and the United Mine Workers of America and the price of coal, and they say nothing. There is very little to say, and most of that Miss Roche has said already.

Miss Roche was a Vassar girl and a social worker. Miss Roche's father was a director of the Rocky Mountain Fuel Company, dominating the northern coal fields of the state. And Colorado was the scene of industrial warfare culminating in the "Ludlow Massacre," the destruction of the labor unions, and the complete domination of the industry by the employers and by the State Industrial Commission, acting in their interest. Miss Roche went her way from juvenile court work in Denver, to Public Educational Association work in New York, to a policewoman's job in Denver, to the organization of Colorado for the Progressives, to Belgian relief work in England and New York, to educational and child welfare and juvenile court positions in Washington and New York and Denver. Colorado went its way through Federal investigations of the coal industry and accumulated bad will to more bad will and more Federal investigations of the coal industry. And Miss Roche's father, after a lifetime of affection for his daughter and lack of sympathy, to put it no more forcefully, for her views, died. With the result that in 1927, on the eve of the so-called I.W.W. strike, Miss Roche became the owner of a controlling interest in the company and directly concerned in its management.

It was a situation to appeal to the somewhat soured risibilities of every miner and mining executive from the union-busting, Rockefeller-controlled C. F. & I. down in Pueblo to the last engine house and tippie of the northern field. Here was the mine-owner's daughter with the advanced ideas actually taking over her father's mine with the big winds already blowing and hell about to bust. They expected her to inaugurate a fool's millennium with a manifesto and then climb down. Or they expected her to become a realist now that the thing was real and change her tune. What she actually did was to sit tight and wait and watch. She watched while the strike broke and guns went off at her mine, the Columbine, and she watched while the strike petered out and the half-starved miners accepted a beggar's sop and everything returned to the *status quo ante*. There was a good deal to see. There were some tens of thousands of dollars worth of machine guns, ammunition, barbed wire, and detectives piled up around her own mines. There were the State Industrial Com-

mission and the people in Pueblo and the miners. And there was the industry itself. But hardly was the strike over when she began to act.

The Commission could tell her what minimum wage she was obliged to pay, but not what maximum she might permit herself. She therefore established her own scale. She paid her men \$7.00 a day, with one exception the highest wage in the United States since the abandonment of the so-called Jacksonville scale of wages. She recognized independent trade unions. She provided a mechanism for arbitration of disputes. She established a Department of Medicine and Health. She provided for better working conditions. And she incorporated all these matters into a contract with her employees. The result was, of course, a roar from the industry. Miss Roche was preparing bankruptcy for herself and disaster for everyone. The United Mine Workers of America would return to unionize the mines. (They have returned.) All the battles and victories of a generation would go for nothing. And who would gain?

First of all, the miners. Miss Roche's men are satisfied with their wages and their working conditions and are attempting to counteract the seasonal nature of their occupation by farming on lands provided them by the company.

Secondly, the Rocky Mountain Fuel Company. In the first six months of the new plan, production and sales had increased 16 per cent, efficiency 19 per cent, and costs, even with, and including, the higher wages, had decreased. With the loyal cooperation, instead of the sullen hostility, of its employees, the company mined 1-and-2/100ths tons per man per day more than it had mined six months before.

And finally Miss Roche. At the age of forty her attractive face and firm chin, her gray eyes and her black hair are pretty well known in the state of Colorado. She seems to signify. People believe in her. And she has, in the best possible surroundings, an almost unheard-of chance to put her social convictions into practice and measure the result.

The competing companies have not gained. Several operators went bankrupt two years ago trying to buck Miss Roche's low-priced coal mined by high-priced miners. It was a queer thing.

Mott of Motors

IF THE twenty-two vice presidents of General Motors were ranked in order of what advertisers call attention-value, the last would not be Charles Stewart Mott. Tall, handsomely set up, with white hair and mustaches and a healthy complexion, he was termed by his third wife "the most distinguished and eligible man in Detroit," and this, too, when she was suing him for divorce. He is a soldier who had served in two wars, an ardent dancer, a manufacturer who has built up his business (automobile hubs, rims, axles) from \$100,000 in 1900 to \$3,000,000

in 1913, and a politician who has been thrice mayor of Flint, Michigan. His associates are at a loss whether to call him parsimonious or prodigal in money matters. In small things, he is certainly not lavish. At one time he corresponded long and earnestly with Vice President Swayne on the subject of paper clips, their use and waste. During the deflation of 1921, he prowled about the General Motors offices turning off superfluous electric lights. When he was in Paris with his third wife, they had two scenes at every dinner party: one when Mr. Mott undertipped and the other when Mrs. Mott, compensatively, overtipped. And yet when employees of the Union Industrial Bank of Flint lost most of the bank's money in the 1929 market collapse, Mr. Mott put in \$3,500,000 of his personal fortune and saved the bank.

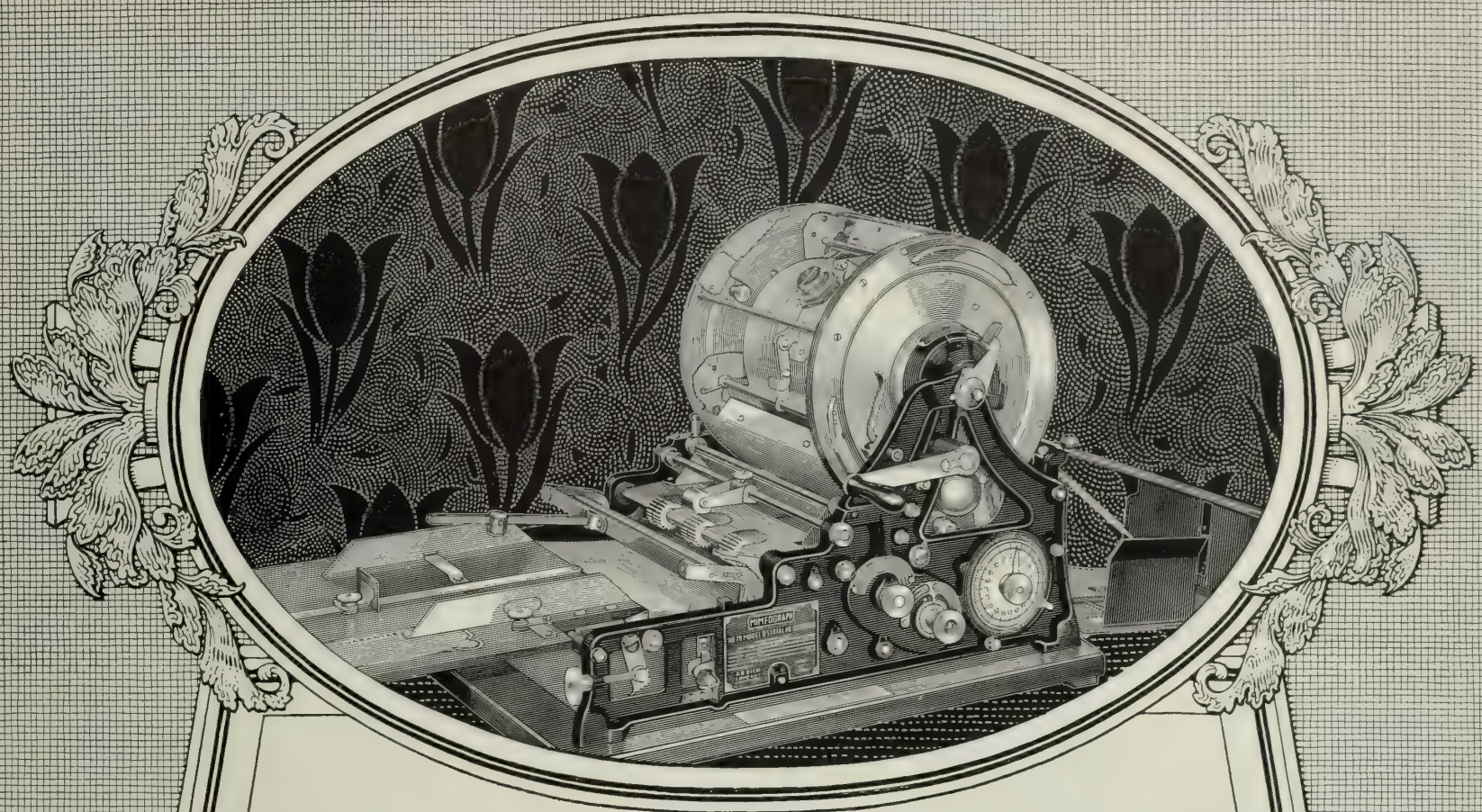
There is good reason to believe that Mr. Mott could save his home town bank many times over. When he sold his thriving business to General Motors, hub, rim, and axle, he took not a cent from the G. M. treasury. He did take, however, a good-sized block of G. M. stock. With steady confidence in the future of General Motors, he has held on to his shares through fair and foul, seen them multiply fiftyfold. It is said that Mr. Mott now owns a staggering block of Motors shares, estimates ranging from 1,000,000 to 3,000,000, that he is furthermore a very large stockholder in such sound companies as U. S. Steel and Union Carbide, and that he is, in a quiet way, one of the wealthiest men in the country.

Bus out of Ford

ONE of the things that Gladys, the twenty-one-passenger NiteCoach of the Pickwick Stages System, does not resemble is an old model Ford. Gladys is about fifty feet under all, ten feet from road to roof, double-decked, beetle-backed, stoat-nosed, and smooth as an olive. She is equipped with a removable motor (twenty minutes), twenty-one berths, a kitchen, and the ordinary accessories of Pullman travel. She carries food, drink, sheets, blankets, china, glasses, mattresses, and a crew of three. And she covers a great deal of ground very sweetly and quietly and regularly. She and Alsacia and Corinne and Morpheus and Gypsy run from coast to coast and from Canada to Laredo—with connections for Victoria and eventually for Mexico City and Acapulco. And at no point in her run does she remotely suggest the still familiar outlines of Model T.

Neither, to be honest, do the Pickwick Terminal Hotels with Fully Equipped Repair, Fuel, and Service Stations attached, which stand at the stages of the Pickwick runs. Nor the handsome and expensive Pickwick planes which run on a 2,800-mile line from Los Angeles to Mexico City, Guatemala City, and San Salvador. Nor even the humble parlor buffet cars with real

[Continued on page 16]



ELIMINATING THE SEASONS

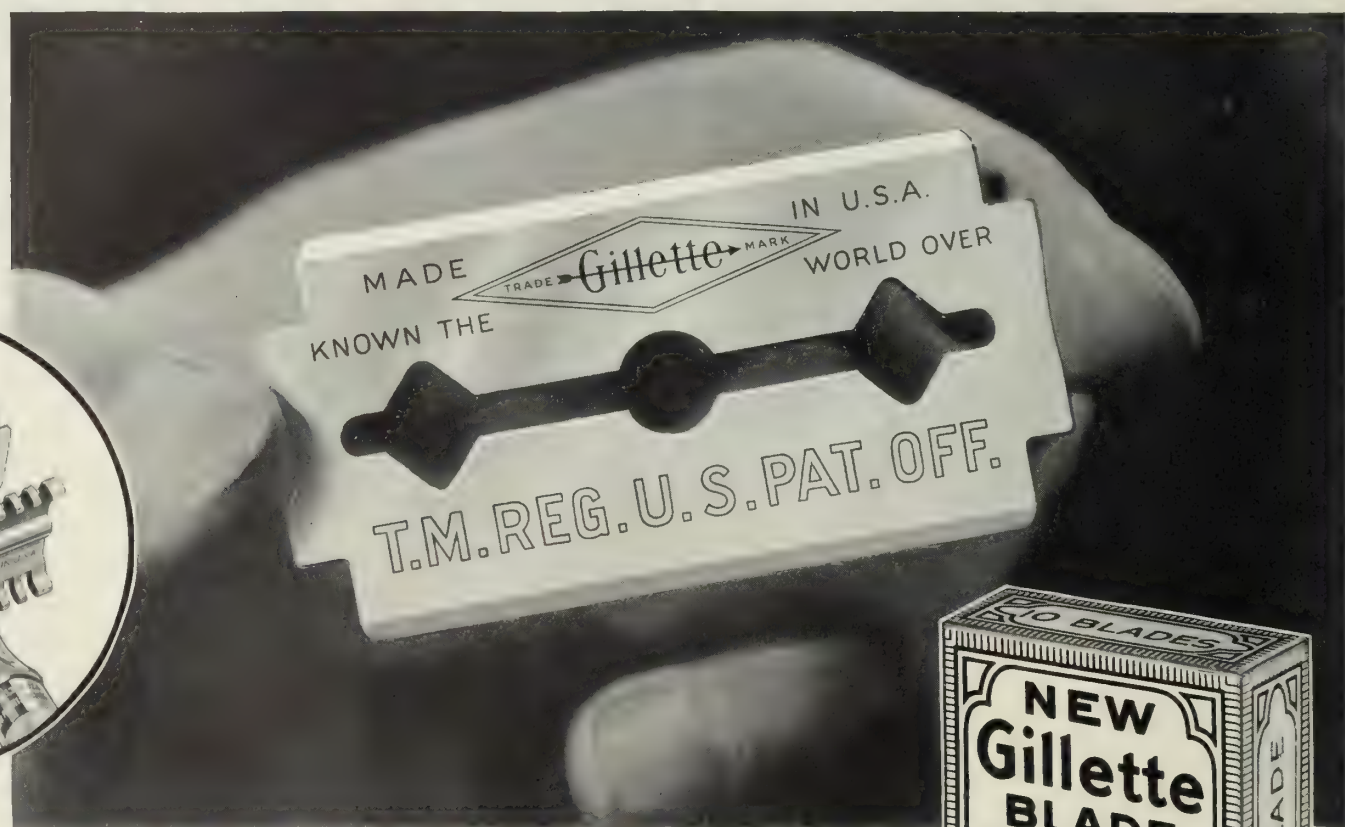
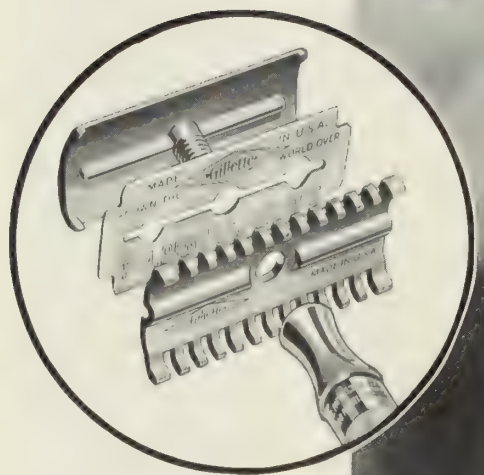
Yesterday business deliberately encouraged seasonal activity. The result was spasmodic effort, periods of rush and over-stress, between periods of lull and no profit. Today business rides on an even keel. It no longer dares to wait the seasons. In the steady, all-year-round driving, which has brought the new epoch of permanent prosperity, the Mimeograph has played a strenuous and important part. Aggressive! Sales-letters, follow-ups, charts, sketches, office communications, price-lists, stock quotations, anything that can be written, typewritten or sketched in line, the Mimeograph duplicates accurately, thousands in every hour. It helps in business-getting. Also it aids in marshalling the organization to the job. Let us tell you about this master duplicator, that needs no experienced operator and assures privacy. Address A. B. Dick Company, Chicago, or 'phone branch in any principal city.

M I M E O G R A P H



BURLINGAME
PUBLIC
LIB.

SQUARE blade-ends



Easier and safer to handle

MOST MEN like fishing—but not fishing down the drain-pipe for a slippery razor blade. That's one of many reasons why a vast army of men are praising the New Gillette Blade. Its square ends can't slip out of soapy fingers; and how easily the new blade reaches into the tight little corners around the mouth, nose and ears!

There are so many other big improvements that you won't appreciate them all until you try this New Gillette Shave yourself. Here are just a few: no more wiping or drying of parts. New blade resists rust. "Razor pull" is ban-

ished forever by new reinforced corners of razor cap and cut-out corners of blade.

Sounds almost impossible to give you all this remarkable new shaving comfort for only one dollar, doesn't it? Yet your dealer has your New Gillette Razor set waiting for you—your choice, in fact, of five styles of handsome cases. Additional new blades are priced at one dollar for ten and fifty cents for five.

Enjoy this new shaving thrill tomorrow morning by seeing your dealer on your way home tonight.

GILLETTE SAFETY RAZOR CO., BOSTON, U. S. A.



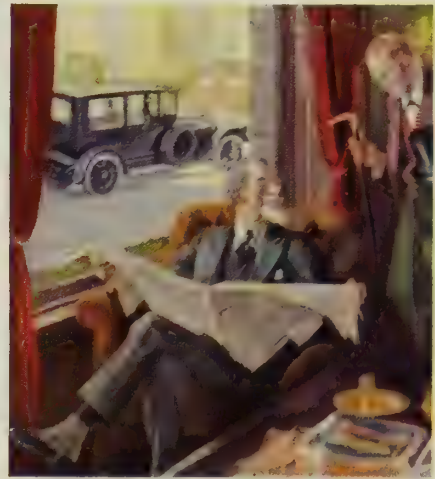
\$1.00 for ten; 50c for five.
The New Gillette Blades
in the new green packet



The New Gillette Shave



That fine things are fairly unchanging, is the story told by these two pictures of an identical scene. Both portray New York's smartest club, its proudest motor car. One was painted twelve years after the other.



The Most Distinguishing Mark of the *Most Distinguished* Motor Car

BURLINGAME
PUBLIC
LIB.

SUPERLATIVES are singularly apt when applied to the fender lamps that are *Pierce-Arrow* . . so intimately are these a part of *America's finest motor car*.

Behind that title, so hard-earned (which otherwise would be sheer arrogance), is the prided handwork of masters in coachcraft . . the second generation of whom are today engaged in the creation of *Pierce-Arrow* finenesses.

Pierce-Arrow reflects, also, the thinking of many great engineers, and the management of

men who put reputation before all things, in the trusteeship that is theirs to preserve.

Should it appear that an exaggerated reverence for ideals is present here, the product itself bears even greater testimony to this very genuine attitude.

Pierce-Arrow today finds expression in three new groups of automobiles, which, for sheer beauty and distinction, were not conceivable without great tradition to draw upon and a patrician pride to inspire.

PIERCE - ARROW

Three New Groups of Straight Eights . . 132 to 144-inch Wheelbases . . \$2695 to \$6250 at Buffalo
(Custom-built Models up to \$10,000)



Gentlemen's Clothes

OF CHARACTER

FOR GOLF AND SPORTSWEAR

The newer style interpretations of correct apparel for the golfer and sportsman are presented in distinctive garments which provide ease and comfort to the wearer

These clothes for wear on turf and field are thoughtfully tailored for us by Hickey-Freeman. Accessories by internationally recognized makers

ILLUSTRATED GOLF BOOKLET ON REQUEST

F. R. TRIPLER & CO.

Outfitters to Gentlemen · Established 1886

MADISON AVENUE AT 46 STREET

New York

kitchens, meals at top speed, and sliding windows in the roof through which may be observed the Scenic Wonders of the Western Hills.

And yet the truth is that a Model T was daddy to them all. There was a young man from Missouri who had reached Los Angeles by way of telephone companies and street car shops in Kentucky, Texas, and Arizona; a \$75,000 mining stake (followed rapidly and irrevocably by the panic of 1907); and a tire manufactory in Cleveland. Once arrived in Los Angeles, he did as the Romans did and sold real estate. The upshot of which venture was the more or less unintentional acquisition of an auto parking station. And to the parking station came the Ford. It came every so often with one load of paying passengers, and it went out again from time to time with another burden of the same. These maneuvers interested the young man from Missouri. The Ford went south. The young man from Missouri wheeled out his Stanley Steamer and went north. If there were paying passengers to the south, there should also be paying passengers to the north. And there were. The result was that the auto parking station became a junction. And eventually in 1915 the young man from Missouri, Mr. Charles Francis Wren, and the owner of the paternal Ford, Mr. A. L. Hayes, got together. They became the Pickwick Stages, and the thing was done. It only remained to pour all their earnings back and take none of their profits out and squeeze and scrape and worry and plan for another ten or fifteen years, and Pickwick was a \$15,000,000 corporation with a thousand-odd modern motor coaches built in its own \$200,000 works to its own designs (powered by Pierce), a chain of broadcasting stations, planes, hotels, service stations, and several thousand employees. Last year Pickwick consolidated with Southern Pacific, Greyhound, and Yellowway to bring the whole western network of motor stages into one system. Pickwick owns one-third of the holding company (Pacific Transportation Securities, Inc.), and Charles Francis Wren is chairman of the executive committee.

In latter years it has not been necessary for Mr. Wren to pour all his earnings back. He lives in the fashionable quarter of Los Angeles on two floors of an apartment house, furnished in part by art pieces collected by Mrs. Wren and

her daughters Gladys (twenty) and Alsacia (nineteen) during a trip abroad. The other members of the household are Mr. Wren's two sons, Charles (twenty-two) and Donald (seventeen). There is a yacht, a very fine automobile, famous cigars, a few clubs, no lodges, and not much church. Mr. Wren does not drink (no principle involved) and prefers his family to other amusements. But he is not altogether a domestic man. For one thing he is extremely eloquent and vivid in his speech. "He can cuss," admiringly observes the pilot of Gladys as he backs her to the curb. "Oh, man! How that little guy can cuss!"

Cuppia to Lewine

A PAIR of New York commodity traders as effective as the famed Tinker-Evers-Chance double-play combination are J. Chester Cuppia, of E. A. Pierce & Co., and Jerome N. Lewine, of Henry Hentz & Co. At the opening of the New York Hide Exchange last June, Cuppia sold the first lot—40,000 pounds of August hides—to Lewine. Both are on the board of governors. The two also work together in the Rubber Exchange of New York, Lewine as a governor and Cuppia as treasurer. They hold the same offices on the newly-formed New York Burlap and Jute Exchange. They both got their start in cotton. Cuppia began his career by losing his accumulated savings of \$10,000 in just three days of operations on the Stock Exchange. An inheritance of \$5,000 came along subsequently, and he put it into cotton. Though he lost it all, and something besides, in an ill-timed flyer in spot cotton, he stayed in the cotton market until he had established his own house, J. Chester Cuppia & Co. When this was absorbed by the great wire house of E. A. Pierce, Cuppia became a Pierce partner. He has one ambition: that his boy should go through Princeton, something which he himself, because of family reverses, was not able to do.

There are not many commodity traders who do not know, and like, Jerry Lewine. He is president of the National Raw Silk Exchange in addition to his governorships of the leather and the rubber exchanges. In Henry Hentz & Co. he is a senior partner, along with Dr. H. B. Baruch, of the famed Baruch tribe. Though Hentz & Co. has become more of a Stock Exchange



Thanks to the GAS COMPANY

..... a new and higher standard of comfort has been established in American homes

MODERN SCIENCE has made it possible to put an end to furnace-room slavery. Aided by its gas companies, progressive America is rapidly abandoning the hand-fired furnace.

- Today, it is a question whether a house can be termed truly and completely modern unless it is automatically heated with gas, the dirt-free, waste-free, instantly responsive fuel which requires no furnace-tending. To build a house this year in a gas-served locality and not install gas-heating is to gamble with the future value of the property.

- In the years to come the prosperity of gas companies and the happiness of their communities will become more and more interdependent as the spread of house heating by gas brings their interests closer and closer together.

BRYANT
GAS
HEATING

BURLINGAME
PUBLIC
LIB.



© 1930, B.H.M.C.

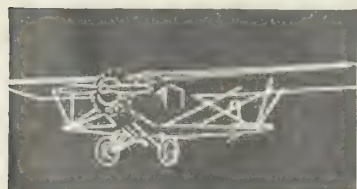
THE BRYANT HEATER & MANUFACTURING CO.
17884 St. Clair Avenue
Cleveland, Ohio



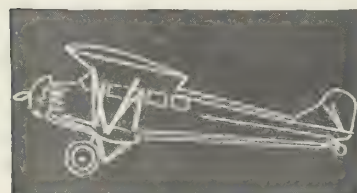
SKIES PLANES MONEY



The Buhl Senior Airedan is an eight-place dual-control plane, priced at \$18,500 with the Wasp engine and \$19,500 with the Hornet or Cyclone.



The Buhl Sport Airedan is a three-place dual-control plane, priced at \$12,000 with J-6 Wright Whirlwind engine and \$11,000 with the J-5.



The Buhl Standard Airedan is a six-place, dual-control plane, priced at \$13,500 with the J-6 Wright Whirlwind engine.

BUSINESS has definitely turned to the air in its endeavor to extract greater value from every working hour. And business, to carry on this most modern, intelligent program, seeks a plane that is constructed, sold and designed to operate upon the sound business fundamentals of speed, safety, convenience and economy. Such is the Buhl Airedan. The ability to delegate responsibility through proper channels distinguishes the successful executive. He cannot err if he thinks of Buhl when he considers the ideal plane to carry on his individual or corporate business up above.

We will gladly mail to any executive an interesting illustrated brochure on "Aviation and Business"

BUHL AIRCRAFT COMPANY
MARYSVILLE, MICH.



house in late years, Lewine makes its influence felt in the commodity markets. He sold his house in Brooklyn not long ago, and now owns the former Mencken estate, Hilltop Farm, Hartsdale, just outside New York in Westchester County. On his twenty-four acres there he grows flowers that are noted even among Westchester hot-houses. There is also a quarter-mile track for horse racing, for he himself rides well, and his children, Mina and Jerome Jr., have their own ponies.

Anthem weakness

EVEN Mr. Ray Long, the enterprising *Cosmopolitan* editor who bagged Coolidge, would find it difficult to induce Mr. Julius Rosenwald to write an autobiographical sketch about "My First Pair of Double-Seated Bike Pants." He probably could not persuade R. Arthur Wood, the former president of the Chicago Stock Exchange, to expound his "Neat System for Picking up Old Razor Blades." These were the subjects which Messrs. Rosenwald and Wood discussed, however, at a recent meeting of The Guild of Former Pipe Organ Pumpers (Chicago Loft). The Guild, whose motto is "Pump, for the Wind Is Fleeting," was founded in 1926 as "a nonsectarian, nonpartisan, nonprofit, and non-essential organization." There is one membership requirement: proof of having once upon a time been an organ pumper. Mr. Rosenwald proved to the satisfaction of the Committee on Admissions that he had, as a boy, pumped the organ in the temple attended by his parents. Another notable member of the Chicago Loft, Benjamin Franklin Affleck, president of Universal Portland Cement Company, produced evidence of having pumped the town church organ in his home town of Belleville, Illinois.

The Guild was conceived and established by Chet Shafer, of *Saturday Evening Post* fame. A banquet in Detroit, at which he found that most of those present had gotten their start in life not by selling newspapers but by pumping an organ in some country church, gave him the idea. There are now almost a thousand members scattered over the country, among them being Will Hays and Senator James Couzens, of Michigan. The Chicago Loft holds a convention every spring at which Mr. Rosenwald takes his turn at pumping the organ

while his fellow members sing hymns, drink beer. In recognition of his pumping abilities, he was last year presented with a huge cast-iron pigeon, a gift probably inspired by the nation-wide campaign the Guild has launched "for the conservation of the wild cast-iron animal life so fecund in the final decades of the past century." The officers of the Guild are called after the organ stops, with Chet Shafer at the head as Grand Diapason.

Benjamin Affleck, once Grand Quint, is now merely a Fellow Pumper (F.P.). There is a bitter dispute between him and Mr. Rosenwald, the present Grand Quint, as to which is the more proficient at organ pumping. Mr. Affleck's professional pride was outraged when Mr. Rosenwald characterized his pumping as "uncertain, unsteady, and undependable," and when he (Mr. Rosenwald) went on to insinuate that he (Mr. Affleck) was notoriously weak on anthems, the rupture was final.

Twin beds

SOME fifteen years ago the Simmons Manufacturing Company built a great number of twin beds and then found that few respectable people would sleep in them. The double bed was as inevitably a part of genteel living as the fern-stand in the living room window or the ice cream in the Sunday dinner. On this statement of the original position, all sides agree; on the solution to the Simmons problem, stories differ. The Simmons people probably credit their extensive advertising campaign in the press; other informants assure us that the situation was saved by the appearance of a *deus ex machina* in the shape of a smart publicity man. "Build more twin beds," cried the publicity man, "and I will sell them!" It seems that Simmons did so. It is certain that presently bright young men were writing poems about twin beds and sending them to columnists, comedians were putting low cracks about twin beds into their revues, and all along Broadway jokes were popping, wisecracks were exploding on the subject of twin beds. From Broadway the stories traveled via the traveling salesman route into the provinces. Within a year people were laughing at twin beds and inevitably buying them. And American sleeping, if not living, had indubitably changed.

T. Bourdier



The combined tonnage of Admiral Dewey's squadron in the battle of Manila Bay was 19,000 tons—less than the tonnage of the *Pennsylvania* or her sister ships, the *California* or the *Virginia*, the new electrically driven vessels in the service of the Panama Pacific line.



BIGGER than Dewey's whole fleet

FOR THE HOME—General Electric and its associated companies manufacture a complete line of electric products and appliances, including G-E MAZDA and G-E Edison MAZDA Lamps, G-E refrigerators, G-E fans, G-E vacuum cleaners, G-E wiring systems, Edison Hotpoint ranges, percolators, toasters, and other Hotpoint products.

FOR INDUSTRY—Several thousand electric products and appliances, including generating and distributing apparatus, motors, electric heating apparatus, street lights, floodlights, traffic lights, airport lights, Cooper Hewitt lights, Victor X-ray apparatus, motion-picture apparatus, electric locomotives and equipment, and street-car equipment.

BUILT not for war but for peace, the 35,000-ton S. S. *Pennsylvania* is not only bigger than all the ships of Dewey's heroic squadron put together, but more efficient than any of them. Her 17,000-hp. motors have enabled the *Pennsylvania* and her sister ships, the *California* and the *Virginia*, to cut the coast-to-coast schedule of the Panama Pacific line to thirteen days, and have set a new standard of noiseless, vibrationless ocean travel.

General Electric engineered and built the electric equipment of these magnificent new vessels. Other General Electric engineers and research scientists are doing equally important pioneer work on land and for the new traffic of the air. The G-E monogram appears on thousands of electric products and appliances as a symbol of research, an assurance of advanced electrical correctness, dependability, and service.

GENERAL ELECTRIC

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY AT 9 P.M., E.S.T., ON A NATION-WIDE N.B.C. NETWORK

A new LUXURY comes to the home

THE song of the brook racing to the sea, the crescendos, the diminuendos of winter's winds, the caressing softness of a spring breeze — the emotions of life's greatest moments—all are expressed in the gorgeous flood of music with which a pipe organ transforms the home.

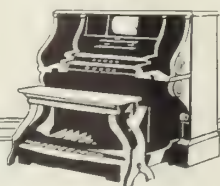
The Wurlitzer Reproducing Residence Organ opens to you entirely new opportunities for the enjoyment of this greatest of luxuries. No great concert pipe organ contains finer materials and workmanship, none is more beautifully voiced than the new Wurlitzer. No residence pipe organ is more responsive to the touch of the organist, or more superb in performance when played by reproducing music roll. Yet this beautiful instrument, ready



WURLITZER *Reproducing Residence* ORGAN

to bring you the world's best in music, at the touch of a button, is so compact that it is easily installed in almost any home, and you will be surprised at its comparatively moderate cost.

You are invited to hear and play this magnificent organ at your nearest Wurlitzer studio—New York, Chicago, Los Angeles, Cincinnati, Cleveland, Detroit, Pittsburgh, Buffalo.



■ Our beautifully illustrated and informative brochure on the Wurlitzer Reproducing Residence Organ, and its installation in the home, will be of special interest to you. A request mailed to any Wurlitzer store will bring you a copy, without obligation.

Banff

... SOCIAL CAPITAL OF THE CANADIAN ROCKIES

18-HOLE
GOLF COURSE

TWO
SWIMMING POOLS

"EN-TOUT-CAS"
TENNIS COURTS

RIDING

INDIAN DAYS
JULY 20-22

OFFICIAL
TRAIL RIDES
JULY-AUGUST

HIGHLAND
GATHERING
AUG. 29-SEPT. 1



SUMMER SPORT AND SOCIAL GAIETY MEET AT BANFF

Summer sport and social gaiety meet at Banff... to make a Rocky Mountain rendezvous for smart society. You canter along spruce-bordered bridle paths on nimble gaited saddle horses. You clamber up mountain trails on trail-wise ponies... or with Swiss guides, if you have higher aspirations. You shoot golf on a \$350,000 course with a \$100,000 club-house... imagine bent-grass greens in the Rockies!... first drive smack across the jade-green, foaming Spray. You knock off a few sets of tennis on *en-tout-cas* courts. You give swimming parties in the great out-of-door sulphur pool rimmed with a sunning-and-loafing terrace. The sulphur

water has healing qualities like the famous spas of Europe. Beside it, lies a fresh water pool to finish your dip.

In the evening, there is dancing with a corking 10-piece orchestra... novel gala entertainments... later, perhaps, a lovely motor ride over smooth roads, while the moonlight floods the mountains. Every time you look up, day or night, there is that unmatched and unmatched view of twenty-mile valley and nine thousand foot peaks. Every time you want anything, there is the courteous service of the baronial hotel. Banff... home of gala Indian Days and a great Highland Gathering... Canada's summer social center, accustomed to pleasing royalty.

Come up this summer and stay!... Special monthly rates for families, European plan. During May, June and September, single with bath, \$8 up per day; double, \$14 up. Period suites for two, \$35 up. Rates higher during July and August. Special servant quarters. Something doing all summer long!

Opening May 14th. For reservations, rates, information, write

Banff Springs Hotel, Alberta, Canada, or any Canadian Pacific Office: New York, Chicago, Atlanta, Boston, Buffalo, Cincinnati, Cleveland, Dallas, Detroit, Indianapolis, Kansas City, Los Angeles, Memphis, Minneapolis, Omaha, Philadelphia, Pittsburgh, Portland, San Francisco, St. Louis, Seattle, Tacoma, Washington. In Canada: Montreal, Nelson, North Bay, Ottawa, Québec, Saint John, Toronto, Vancouver, Victoria, Winnipeg.



Listen in WJZ and associated stations, every Sunday 9:15, E. S. T., 8:15, C. S. T. Alfred Heather Light Opera Company, also appearing at Banff during July and August.

BANFF SPRINGS.....A CANADIAN PACIFIC HOTEL

A home run into the street and the outfielder **STEPS INTO**

YOUR PATH !!

It's those quick, unexpected emergencies that make you realize that you can't have a *surplus* of safety in tires.

Big mileage has been the most popular reason for General's fifteen years of quality leadership. But now, there is a bigger factor—a more vital consideration behind the nation-wide swing to General. It's that *extra margin of safety*.

When the sudden emergency comes up—the split second that tests all the *ability* of your tires to grip and hold—how much is the extra margin of a few feet worth—sometimes even a few inches—when it separates you from a probable fatality?

The *Dual-Balloon* multiplies the natural tendency of rubber to grip and hold. There are extra cushions of soft rubber, built-in shock absorbers, that let the whole tire grip the road with a closer, clinging traction. This extra "give" inside the tire, plus the lower pressure and the biggest mileage you've ever known all combine to give you the full measure of safety.

Safety in the freedom from running on risky rubber at high speeds. Safety in the ability to negotiate a sudden turn at straight-on speed when there is no alternative. Safety in the ability to take hold and stop *just short* of an impact.

Split seconds that make you realize the priceless value of

These are not fictitious claims for the *Dual-Balloon*. They are facts that you can prove by any comparison you want to make. They are facts that have made millions of car owners realize the priceless value of that extra margin of safety. The General Tire and Rubber Co., Akron, Ohio.

—goes a long way to make friends



Complete motion picture films (including slow motion detail) showing a series of non-skid tests of all types of tires on snow and ice and on wet pavement, will be furnished Automobile Clubs and other organizations for use in safety first campaigns. Car owners can obtain illustrated bulletins of these tests. Address your General Tire Dealer or the General Tire and Rubber Co., Akron, Ohio.

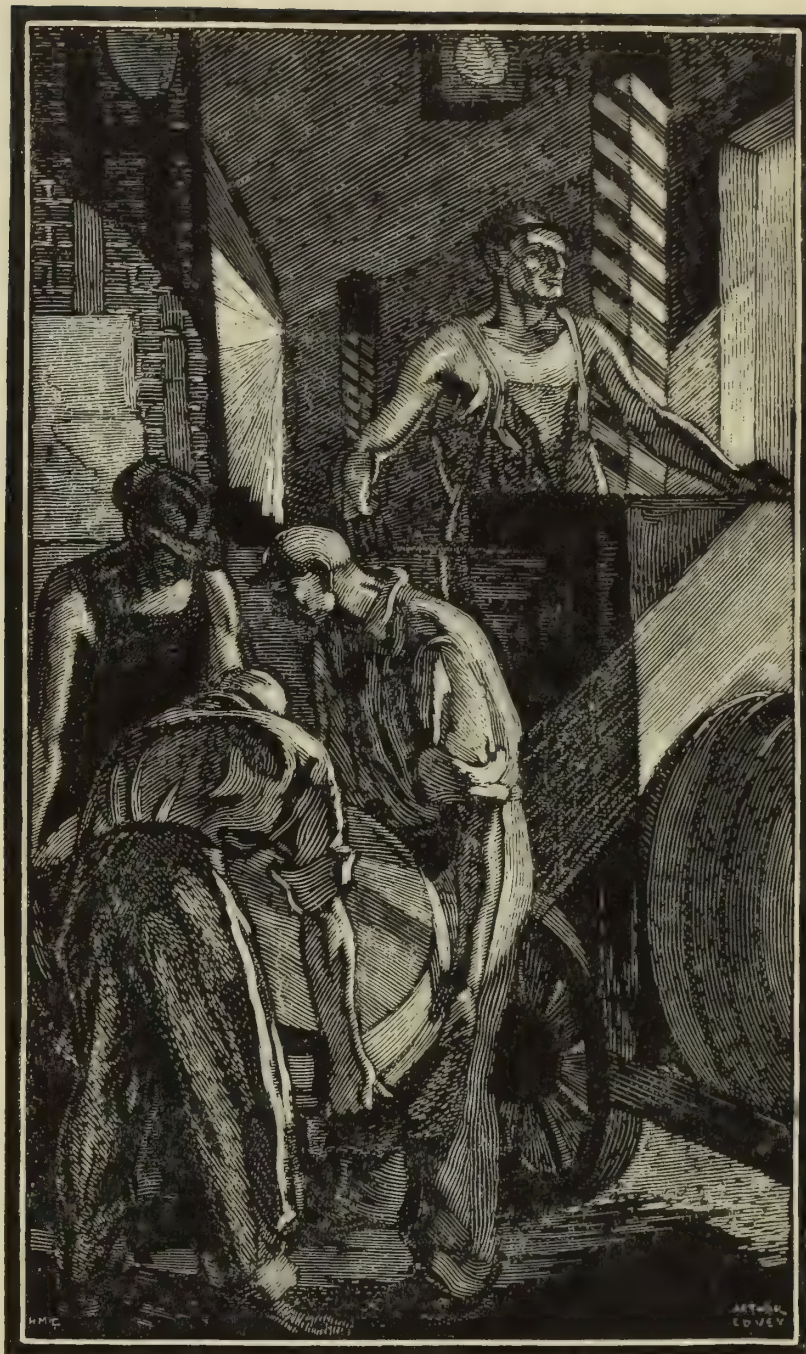


T H E W O R L D ' S S A F E S T T I R E

The **GENERAL** *Dual* -BALLOON *S*

NORTON

Grinding Wheels
Grinding and Lapping Machines
Abrasives for Polishing
Refractories
Pulpstones
Porous Plates
Floor and Stair Tile
Abrasive Aggregate



Wood block engraving by Howard McCormick
from Mural by Arthur Covey

When the Norton Grinding Wheel is taken from the kiln it is not simply a grinding wheel with the sole function of wearing down metal, but a production tool engineered and built to perform a specific high precision work in the fashioning of iron, steel, steel alloys, glass, marble and other materials.

NORTON COMPANY • WORCESTER • MASSACHUSETTS • U • S • A

The New York Trust Company

*Capital, Surplus and Undivided
Profits \$47,000,000*

DOMESTIC
and
FOREIGN BANKING
FACILITIES

Trust Services

Personal Services

100 BROADWAY
40TH STREET AND MADISON AVENUE
57TH STREET AND FIFTH AVENUE



BURLINGAME
PUBLIC
LIB.

© 1930
THE WILLIAM F. WHOLEY CO.
NEW YORK

The service of this company includes the expert planning of office space, interior architectural design, decoration, lighting and furnishing, together with the execution of every detail by a trained, unified organization of specialists. Recommendations and sketches furnished without obligation to business executives and professional men.

The casually minded man would say that the chief things of value in this executive office were the rich furnishings, the mantel and the woodwork. But they are not all, as hundreds of our distinguished clients would agree. The "plus-values" in every office created by Wholey are just

as tangible, although they never appear on the surface. They are peace of mind, inspiration, cordiality, the evidence of superiority. Such things are not attained simply by accident. That is why America's leading executives and professional men come to us!

The WILLIAM F. WHOLEY CO. *Inc.*

Equipment Specialists

11 East 36th Street, New York

Office Furniture



Interior Decoration



Office Planning



Deliveries

The rhythmic tempo of Modern Business increases daily. Diminished inventories are one of the results of this acceleration.

Today's stock must be moved tomorrow. Keeping the pace frequently depends solely on unclogged channels of physical distribution—swift and certain deliveries. . . . General Box Company with its nation-wide facilities and local service at many points guarantees in any emergency a dependable supply of boxes and crates, which, in turn, insures trouble-proof shipping schedules. . . . In the aggregate, the thirteen modern plants of General Box Company are the productive power behind General Box Engineers and their day by day work of designing money-saving boxes and crates.

You are invited to make use of these reliable resources.

GENERAL BOX COMPANY

44 WEST ILLINOIS STREET • CHICAGO ILLINOIS

*One Service
NationWide*

Among those with whom we have
cooperated —

NATIONAL BISCUIT COMPANY
(Export)

J. C. PENNEY COMPANY

THE WHITE COMPANY

THE MAYTAG COMPANY

KOHLER OF KOHLER

1,200,000 Consumer Inquiries

600,000 PERSONAL CALLS AND 600,000 COUPONS BY MAIL

At 9¢ Each, in 13 Months

FOR several years, many advertising men, with the welfare of the business at heart, have urged a return to the methods of common honesty.

Their criticism, aided by the inherent weaknesses of the gross types of advertising they condemned, has borne fruit. Signs of a return to sincerity are manifest in advertising columns today.

We wish to submit the results of a campaign that made sincerity its first principle.

The opportunity came to introduce and sell to the most critical market in America a new product, but one whose advertising would have to compete with the glaring excesses of the day—the campaigns that have flourished through the immoderate use of purchased testimonials and intemperate claims.

After research, two conclusions were drawn: First, that the most genuine expression of faith in the product would be to offer a complimentary package to the prospective user. Second, That this plan would not succeed without advertising copy so manifestly sincere as to disassociate in the public's mind, this different offer from ordinary sampling.

The campaign was begun on that basis.

A rotogravure page in the New York Times in April, 1929, produced 55,000 replies; and smaller advertisements produced corresponding results.

In June, New York's predominant specialty shop mailed a message to 85,000 credit customers, of whom 12,000 visited the store to obtain the complimentary package. Soon 200 leading stores in as many cities sent the same message to 1,500,000 chosen customers; 600,000 responded. This advertising material and its postage was paid for by the stores. There was no advertising cost to the manufacturer, no commission to the agency. This plan, by

extensively utilizing the cooperation of the stores resulted in a reduction of 50 per cent. in what would have been the manufacturer's normal sampling costs.

In the Fall a rotogravure page in the New York Tribune pulled 24,000 coupons, and one in the New York Post, 4,000.

In February the first advertisement in the national magazine series (half-page in 12,000,000 circulation and full-page in 4,000,000) pulled 50,000 replies from a well-hidden offer. No coupon was used. In March, a page in 12 magazines (16,000,000 circulation) pulled 500,000 . . .

Dramatic results. More so, since repeat sales substantiate the consumer acceptance that such results imply.

This campaign has been praised by editors and competitors. Some have gone so far as to call it the notable campaign of its type. Be that as it may, their comments represent to us not so much an opinion on the power of this plan as a hearty welcome to a long-needed return to the lasting principle of sincerity.

THE business policy under which this agency operates conduces to sincerity in all phases of its work. For example, its profit is divorced from variations in the size or allocation of a client's appropriation, and is established by a *fee system* based on the work to be done.

This plan insures freedom from prejudice in estimating the relative advantages of one course of action as compared with another; in short the natural causes of bias in an agency are overcome. There is nothing to deflect the agency's interest from whatever plan of campaign is best for the client.

We shall be glad to furnish details of the above campaign to business executives and bankers who may be interested.

BURLINGAME
PUBLIC
LIB.

COWAN & DENGLE

ADVERTISING • MERCHANDISING • SALES COUNSEL

NEW YORK

THE protection of a
Fortune is usually assured
by the creation of a planned
investment program which
is designed to meet
the Investor's
individual
needs.

WE OFFER YOU THE FACILITIES OF
THIS INVESTMENT ORGANIZATION

STONE & WEBSTER
AND BLODGET
INCORPORATED

NEW YORK · BOSTON · CHICAGO · PHILADELPHIA

Statistics

THE United States accounts for only 7 per cent of the world's population, but consumes 72 per cent of the world's silk, 69 per cent of the world's crude petroleum, 56 per cent of its rubber, 53 per cent of its tin, 48 per cent of its coffee, 47 per cent of its copper, 42 per cent of its pig iron, 36 per cent of its coal, and 21 per cent of its sugar. Twenty-three per cent of the world's automobiles, 60 per cent of its telegraph and telephone equipment, 33 per cent of its railroads are operated by the United States. Nearly one-half of the world's gold is in the United States, where are two-thirds of the total world banking resources.

In a telephone conversation between two persons in the same city, there is a minimum of 465 chances for mechanical breakdown—15 movable contacts, 400 mechanically secured or soldered connections, and 50 others. If there is a switchboard at each end, there are some 200 more contacts. Between Chicago and New York there are many more opportunities for contacts to fail—40,000 mechanically secured connections, 1,500 relay, and 9,000 other contacts.

By no means negligible is the government printing bill resulting from the long Senate debates on the tariff bill through the fall and winter. Of the total, some \$131,900, 42 per cent was incurred by the oratory of the Democrats, 30 per cent by the Republicans, 28 per cent by the Insurgents. Senator Reed Smoot's speech reporting the bill occupied twenty-two pages of the *Congressional Record*, cost \$1,100. Three speeches by Senator Robert La Follette cost \$3,100.

One's risk, in boarding a trolley car, is infinitesimal. Last year there were only seven fatal accidents on U. S. trolleys, which traveled a total of 256,849,500 miles—one death for every 36,692,785 miles. This compares with the newest method of travel: 78,940,161 air miles, with 183 casualties—one death for every 43,401 miles.

The cost of a Ford at the factory is just about the same as the cost of a pound of beefsteak at the wholesaler's. The Ford sedan brings 20.8 cents per pound, and beef 21.5.

Automobiles of all classes compare in price per pound with commodities as follows:

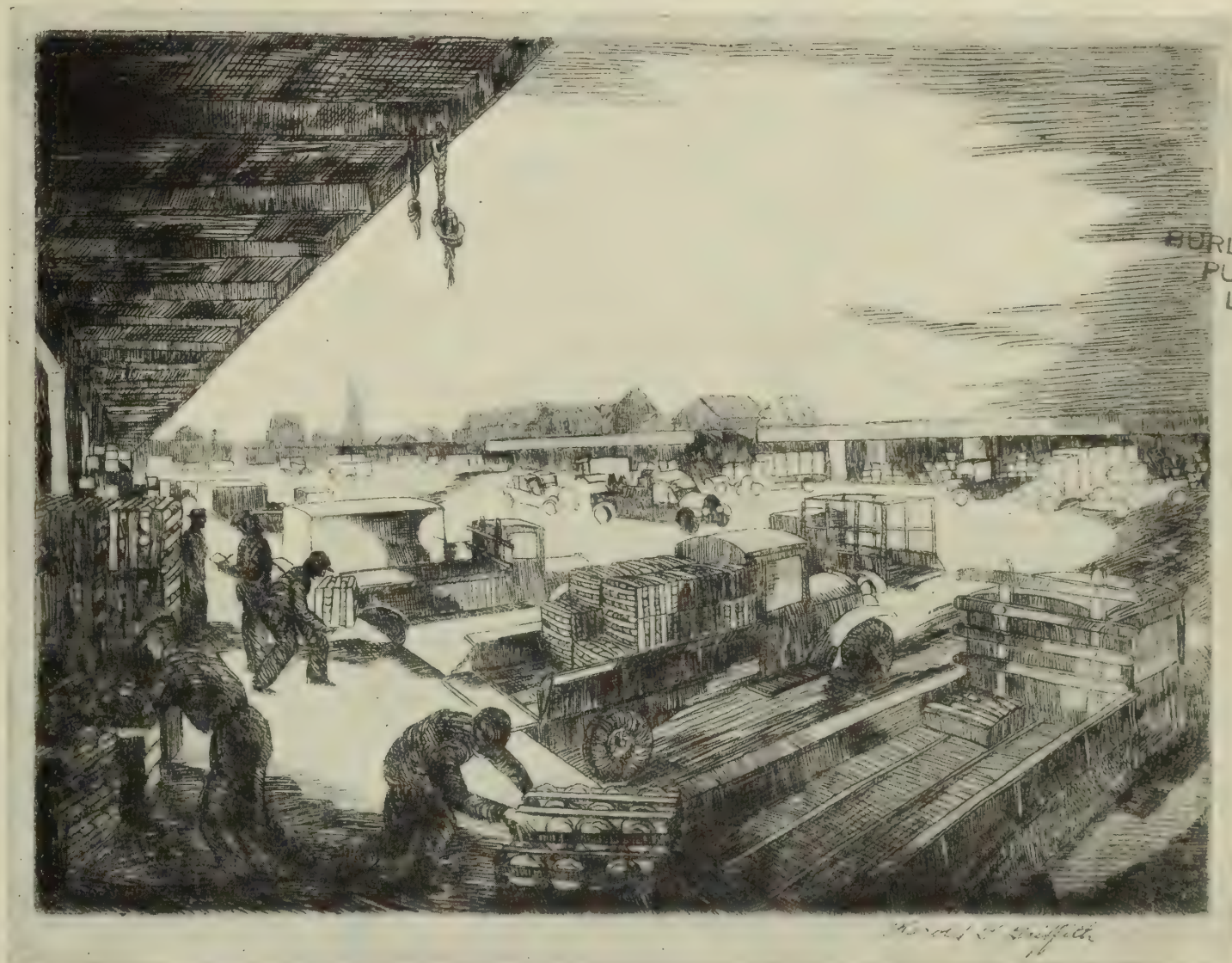
Coffee	\$0.077
Cotton	0.159
Rubber	0.168
Pork	0.295
Beef	0.216
Cars under \$1,000	0.271
Cars—\$1,000 to \$2,000	0.378
Cars—\$2,000 to \$5,000	0.671
Rayon	1.150
Silk	4.530

The total resources of investment trusts have increased in the last five years, from less than \$10,000,000 to more than \$3,000,000,000. The year 1929 accounted for \$2,000,000,000 of this growth.

Studies of the distribution of an automobile selling for some \$1,100 show that 29 per cent were bought by laborers; 30 per cent by foremen, clerks, and salesmen; 14 per cent by housewives; 27 per cent by merchants and manufacturers.

The air transport line from Santiago, Chile, to Mendoza, Argentina, is the highest regularly operating line in the world. Oxygen tanks are provided for the passengers as the plane crosses the Andes at a height of from 18,000 to 25,000 feet.

IF YOU WANT AMPLE TERMINAL FACILITIES



BURLINGAME
PUBLIC
LIB.

CLEVELAND'S steam railroads have 26 modern and efficient freight stations in the Cleveland area. With a daily movement of 4,000 cars, the average car is handled in less than five hours. Serving these stations are 72 team tracks, 11 commercial warehouses, with 1,600,000 square feet of storage space, and 6 cold storage warehouses which will supply the newest and most modern terminal facilities for both shipper and jobber until Cleveland's population exceeds 2,000,000 people.

¶ River and lake frontage supply adequate facilities for handling water shipments. Among these is "the finest terminal for handling water ship-

ments of automobiles along the Great Lakes." Interurban, truck and air terminals are equally advanced in efficiency and convenience.

¶ Manufacturers and jobbers interested in a location where terminal facilities seldom occasion delay or loss of shipments, will find this important factor at Cleveland. For specific data address this Bank.

© G. T. Co.

**GUARDIAN
TRUST COMPANY
CLEVELAND, OHIO**
RESOURCES MORE THAN \$165,000,000

Our Service to Security Traders

CUSTOMERS maintaining margin accounts with us expect and receive prompt and efficient executions of trading orders from our specially trained staff of customers' men and floor brokers.

Investigations concerning stock market conditions and movements are available in the form of a daily market letter and special bulletins.

*These facilities are available to any investor or trader
Your inquiry is cordially solicited*

HORNBLOWER & WEEKS

ESTABLISHED 1888

BOSTON
DETROIT

NEW YORK
PROVIDENCE

CHICAGO
PORTLAND, ME.

CLEVELAND
PITTSBURGH

Members of the New York, Boston, Chicago, Cleveland, Pittsburgh and Detroit Stock Exchanges and the New York Curb Exchange

ART IN INDUSTRY

In connection with the opening of their new first floor and the painting therefor of murals by Mr. Boardman Robinson, the Kaufmann Department Stores, Inc. of Pittsburgh, Pa. announces a prize essay contest on the subject "Art in Industry", the prize to be \$1,000 and the prize-winning essay to be published in a forthcoming issue of FORTUNE.

Rules of the Contest

- (1) The Contest is open to anyone (excluding employees of Kaufmann Department Stores, Inc. or Time, Inc.) who submits an essay of less than 5,000 words which deals with some particular phase of or with the general subject of Art in Industry.
- (2) The contest will open Saturday, May 31, 1930. All manuscripts must be in the hands of the Art in Industry Contests Editor, Kaufmann Department Stores, Inc., Pittsburgh, Pa., by midnight, Wednesday, October 1, 1930. Manuscripts received after October 1 will not be considered.
- (3) The prize-winning essay will be published in a forthcoming issue of FORTUNE.
- (4) The essays will be judged by a committee to be announced later.
- (5) All manuscripts must be typewritten and have the name and address of the contestant in the upper left hand corner of each sheet of paper.
- (6) Only one essay may be submitted by each contestant.
- (7) Prize for the winning essay will be \$1,000. In case of tie, each winner will receive the full amount of the prize. All information regarding the contest may be obtained from the Art in Industry Contests Editor, Kaufmann Department Stores, Inc., Pittsburgh, Pa.

(Signed)

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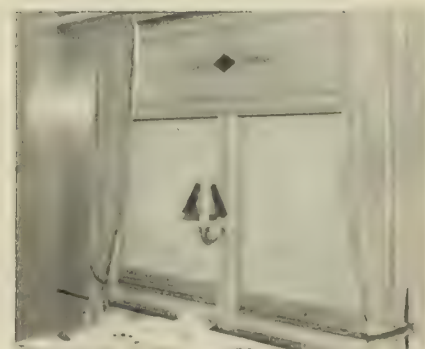




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P. W. Hitchfield
President

GOOD

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LIB.

Volume I

Fortune

Number 5

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EVERY SPRING THE U. S. FLEET ASSEMBLES IN THE CARIBBEAN FOR SEA AND FOR AIR MANEUVERS. FROM THE DECK OF THE AIRCRAFT CARRIER *LEXINGTON* SWEEP UP SQUADRONS OF BOMBING PLANES TO ATTACK THE RIVAL FLEET BEYOND THE 33,000 YARD RANGE OF THE DREADNAUGHTS MOVING ON THE RIM OF A DESTROYER SMOKE SCREEN

The Power of the U. S. Fleet

Is relatively not so great as might be supposed, nor so expensive. Mr. Lodge figures American sea power is about half Great Britain's and the cost about 3 per cent of our governmental expenditures.

(A nation which could quite easily build the greatest and grandest Navy in the world and does not is something new in the world. Moreover, in public discussions this novelty overshadows the fact that the United States does have a Navy and reasons for a Navy. One who knows and likes the Navy is Henry Cabot Lodge, grandson of the late Senator from Massachusetts, a journalist already high in the counsels of that great Republican newspaper, the New York HERALD TRIBUNE. To FORTUNE, Mr. Lodge contributes the following article, which is at once a simple and cogent presentation of the "realist" point of view.)

IF THE broad justifications of the Navy are sufficiently obvious, it is certainly true that the degree of the Navy's importance at the present time is still only imperfectly understood. Many a reader of FORTUNE went to school at a time when the United States was, in the large sense, an agricultural country. We were taught that the United States fed itself and had an agricultural surplus which it sent abroad. Manufactures, of course, there were, but their production fell far short of domestic requirements and had to be supplemented by importations. That relationship is now reversed, for one of the disturbing as well as one of the stimulating facts about the United States is that it changes more rapidly in even its very fundamentals than does any other country of similar size.

So it is that if we were going to school today and were being properly taught, we would see that the United States is a country producing more than it consumes, but requiring constantly increasing imports of both crude materials and foodstuffs. We would learn that one-quarter of our essential raw material imports come from within a 1,000 mile radius of Singapore, which itself is 12,000 standard miles from New York, that the United States today imports more foodstuffs than it exports, that its food exports are little more than twice those of the British Isles, and that its total imports are more than four-fifths of its exports. The simple and wholesome traditions of our early republicanism are still so strong that many Americans do not realize the potency of their own country. They would undoubtedly find it hard to believe that the economic productivity of the United States about equals that of all the nations of Europe west of Russia or that of all other parts of the world lumped together. Having read schoolbooks wherein the primacy and might of Great Britain always loomed as a permanent and unshakable fact, they would be most interested to learn that the external trade of the United States is as world-wide and as great as that of any other single country and that our exports are greater than those of any one nation and may be said to support, directly or indirectly, one-tenth of our population.

In this connection the following figures on the trade of the United States and the United Kingdom are of paramount importance:

	FOREIGN TRADE—1900	
United States \$2,224,000,000		United Kingdom \$4,271,000,000
	FOREIGN TRADE—1928	
United States \$9,220,000,000		United Kingdom \$9,972,000,000

The United Kingdom figures include trade within the Empire, but the American figures do not include all of our sea-borne commerce which, of course, is as vital an element in our maritime problem as our purely foreign trade.

In a campaign speech in Boston, October 16, 1928, Herbert Hoover said:

We might survive as a nation, though on a lower living standard and wages, if we have to suppress the 9 or 10 per cent of our total production now sold abroad. But our whole standard of life would be paralyzed and much of the joy of living destroyed if we were denied sufficient imports . . .

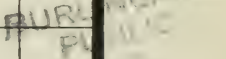
If this happens, we must stagnate and degenerate in civilization . . . We could not run an automobile, we could not operate a dynamo or use a telephone were we without imported raw materials from the tropics . . . Today we are the largest importers and the second largest exporters of goods in the world . . . Our total volume of export translates itself into employment for 2,400,000 families . . . And in addition to this, millions more families find employment in the manufacture of imported raw materials.

As has just been said, the true test of naval need is not only foreign trade but external trade, which in the case of the United States includes not only foreign trade but that with Alaska, Hawaii, and Porto Rico. In 1929 this United States external trade was \$10,076,000,000. In the same year the external trade of the United Kingdom was \$10,016,000,000. Deducting the inland trade of the United States proper with Canada and Mexico, our total external sea-borne trade amounts to about \$8,500,000,000, to which should be added some \$5,600,000,000 of coastwise and intercoastal trade, making our total sea-borne traffic approximately \$14,100,000,000.

A Note on Clayton Knight's Frontispiece

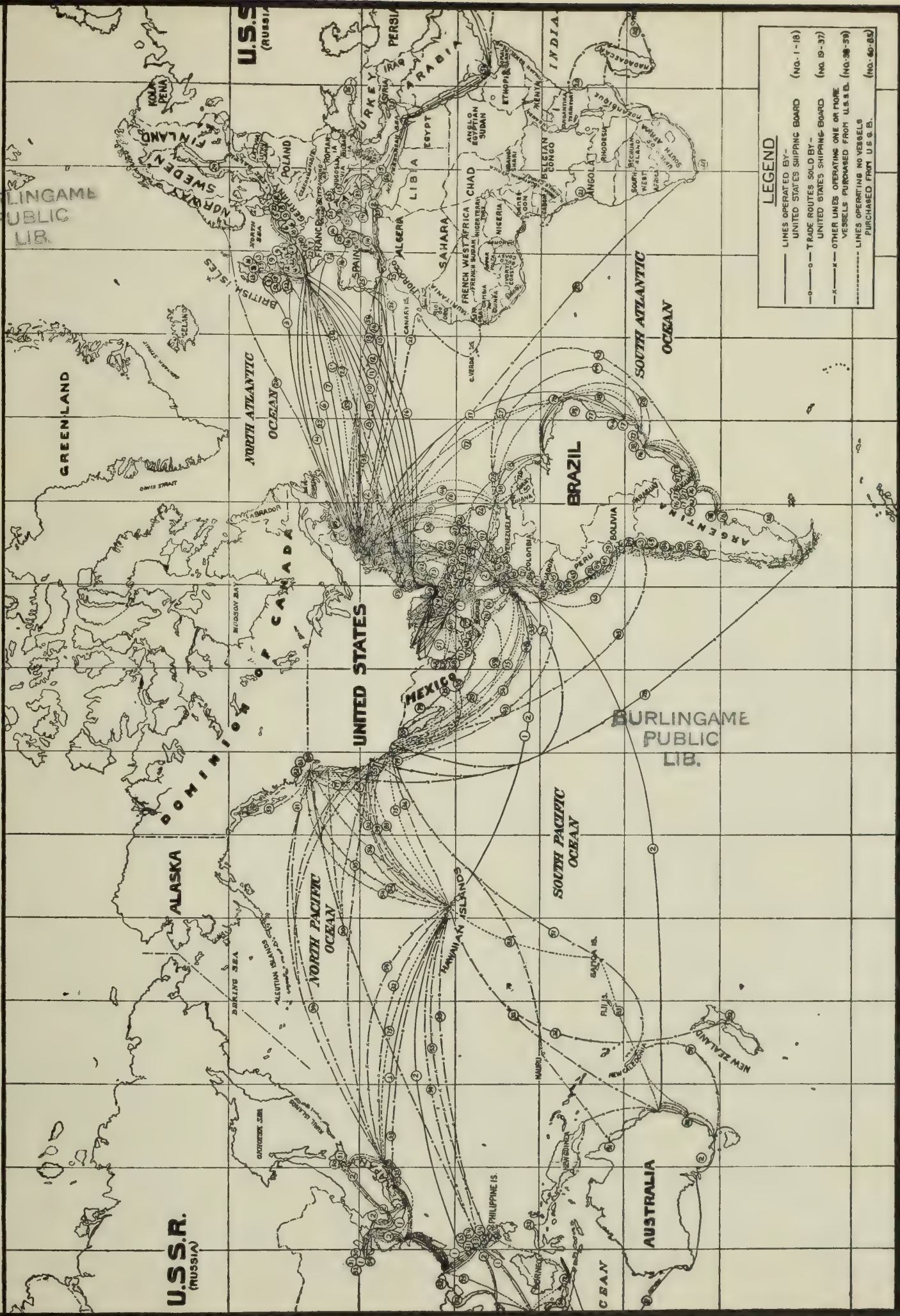
NAVAL aviation, unlike Army aviation, is largely a product of post-War days. While the Army has amplified a technique already well established in 1918, the Navy has had to develop new material and new tactics to meet requirements for conducting an aerial warfare at sea. It is all the more significant that to the Navy goes much credit for the development of the air-cooled engine and for the evolution of the most modern pursuit planes now standard for Army and Navy alike; that to the Navy goes a large measure, at least, of credit for the present use of metal construction and of radio communication in planes. Our big flying boats and seaplanes are a product of naval ingenuity in recent years, as are, too, the huge airships now being built. No large vessel in the 1930 Navy but has its quota of ships and fliers; no naval officer but is indoctrinated with the military theory of aviation. It is this phenomenal post-War development that Mr. Clayton Knight, himself a War-time flier with the R.A.F., records on the opposite page.

JULY 1, 1914



cent of our trade sailed under the American flag, and equally significant that after the Civil War, with the development of Britain's coal and iron, our shipping lagged until, in 1910, it carried but 10 per cent of all American goods. Three things helped to spur our building again: the War, the

AMERICAN FLAG SERVICES IN FOREIGN AND NONCONTIGUOUS TRADES JULY 1, 1929



Panama Canal, and the realization of our own coal and iron resources. The artificial post-War peak of 1922 has also been disregarded: the second chart shows only the result of a fifteen-year swing which has now reached a point at which more than one-third of our commerce is carried

in American ships. In figures, this proportion is expressed as follows:

Foreign ships	\$5,187,931,000
U. S. ships	2,592,512,000
Overland	1,201,934,000
Parcel post	139,167,000

These are facts underlying our economic structure. Having conquered our continent, the United States is back again in the position it held in the 1830's and at the time of the Revolution, a position in which her future and her opportunity lay on the sea. Moreover the time may well be approaching when we may say of ourselves what Lord Fisher once said of Great Britain—that our frontiers are the coast lines of the enemy.

It is thus a safe guess that if the United States had been born fifty years ago when men's minds were intent on the development of the land, we should today have no fixed policies or traditions wherewith to guide the attitude of the government toward foreign trade. But because the sea at previous times in our history has been an indispensable channel of prosperity, we find ourselves today with naval traditions and policies sanctified by custom, most of which are well tested by time.

Where business is immediately concerned, the policies are three in number. First, the maintenance of the "open door" in foreign commerce so that Americans may trade on an equal footing with other foreigners abroad. This policy, repeatedly reasserted even in the last ten years,

has saved China from dismemberment. Second, protection of American citizens abroad engaged in lawful business for the promotion of commerce. In support of the responsibilities entailed by this policy, we built the U. S. S. *Constitution* and her sister frigates, fought the French in 1798, the Barbary pirates intermittently from 1801 to 1816, the British from 1812 to 1815, and the Germans in 1917, officially because of their interference with our rights on the seas.

The third major policy exists to prevent the establishment of European colonies or spheres of influence by European powers in the Western Hemisphere—in other words, the Monroe Doctrine. In this connection it is worth recalling that the late President Roosevelt had to tell the German Ambassador that if the Kaiser persisted in his actions toward Venezuela, he would order the American fleet into the Caribbean; and, as is well known, many of our temporary interventions in Central American affairs have been, incidentally, to prevent other powers from using intervention as a way to secure a foothold.

There are, besides, the essential policies of protecting the Panama Canal, our insular possessions, and Alaska, which, by themselves, would require a Navy of no small dimensions.

Although we take these policies for granted, it is obvious that if we were not able to maintain them, they would be speedily nullified. Where our maximum demand is for trade equality, that of most other nations is for trade privilege. Therefore the maintenance of the "open door" seems just as damaging to others as it seems fair to us. If other nations felt they could "get away with it," they would gladly create special preserves for themselves in those foreign markets which are becoming increasingly important to us. The same is true of protecting American citizens abroad. If it were thought that the American in foreign lands could be trifled with, he would be. And if a European nation concluded that it could establish a profitable dependency in the Americas, it is only natural to believe that it would do so.

Assume, for instance, that instead of our external trade having increased four and one-half fold while Great Britain's increase was merely two and one-half fold, each had increased three and one-half fold. The increment to Great Britain would have probably forestalled her unemployment problem and done much to solve her other economic stringencies—but not necessarily to the economic or political advantage



Courtesy House Committee on Naval Affairs

THE U. S. S. CALIFORNIA, PAINTED BY CHARLES ROBERT PATTERSON IN 1926 WHEN SHE WAS FLAGSHIP OF THE U. S. FLEET

of the United States. The fact is often that what is one man's meat is another man's poison and, in the case of so typically American a policy as the Monroe Doctrine, for instance, the visible force which prevents, say, a European state from establishing a foreign dependency in the Americas is not the Peruvian Navy or the Argentine Army, but the Navy of the United States, backed up by the will of the American people.

War—its risk

To understand the risks of war, we must first understand ourselves. We must realize that we are a trading nation and a gain-loving nation. These two qualities are in harmony with each other. But we are also a peaceful nation. This is, to be sure, due to the subconscious personal inclination of Americans, but it can also be attributed to the fact that the maintenance of the *status quo* is beyond even the slightest doubt to our immense advantage. If we were in the position of Germany, for instance, and had a strip of foreign territory separating New England and the Middle Atlantic States from the rest of the country, or if we were, like Austria, an impossible economic unit, we might feel differently about the regime of things as they are. We are, however, satisfied with the world as it is, and with good reason. We should not, however, make the common mistake of assuming that because we feel a certain way, others must feel that way too. We have nothing to gain by a war, but others may think that they have.

Broadly speaking, the ways in which the Navy might have to enter actual combat fall under two heads: first, with regard to weak nations; second, with regard to strong ones.

Besides the Caribbean countries, we must occasionally intervene in the East. Marines and bluejackets represent the Navy in China today. It is enough to say that during the past 115 years of our existence, the armed forces of the United States have been landed on foreign soil for the protection of the lives and property of American citizens more than one hundred times. Without a declaration of war, bluejackets and marines have gone ashore from the Ægean Islands to Manchuria and from Mexico to the Falkland Islands.

The chances of trouble where stronger nations are concerned cannot be stated categorically, however real they may be. Our international prowess, however, must make it sufficiently obvious that Mr. William Howard Gardiner was right in applying the term "Insular America" to the United States and in showing that we are in effect a vast mid-oceanic island and not a self-sufficient continent—that we, in short, occupy a central maritime position and have a population which, for the maintenance of its standard of living, will increasingly require the wealth that is drawn from the sea.

Moreover, history shows that the new and rising nation, whether it be the United States today or the Kingdom of Prussia under Frederick the Great, only rises at the expense of others and consequently only after the others

have failed in keeping her down. So it is that Sir Esme Howard, the last British Ambassador to the United States, could say a few years ago: "The only possible source of trouble that I can see in the future might arise out of economic competition; it seems to me that the struggle for markets will be more acute and violent than in the past."

It is not only because we are growing in an economic sense that we tread on other people's toes. Our trade prowess is an individual rather than a national matter and the "man on the street" is probably not keenly aware of it. There are, however, such deliberate and conscious policies as our immigration act and our protective tariffs, both of which are extremely irritating to foreign nations and both of which are approved by the majority of Americans.

Moreover, we do not intend to draw in our horns, reduce our trade, and abandon the policies which are the foundation of our well-being. And in all truth must it be said that as far as the eye can see, no single foreign power is going to try to force us to do so at the present time. A combination of powers, however, is not inconceivable and is historically on the cards. The nations banded together unsuccessfully against Frederick the Great, successfully against Napoleon, and successfully against Imperial Germany. I do not mean by this that we now do or ever shall resemble any of these countries, but it is not at all inconceivable that others might think of us in just such terms. The correctness of a certain view is sometimes not as important as



Courtesy House Committee on Naval Affairs

A CONVOY OF U. S. DESTROYERS ESCORTING A MERCHANT SHIP, BY LIEUTENANT COMMANDER H. REUTERDAHL

the vigor with which it is held. As Mr. Owen D. Young recently observed, "America is too rich to be loved. She is well enough off to be envied."

What is an adequate Navy?

The French, with characteristic logic, speak of the "absolute naval needs" of a nation as though the nation were floating in space removed from any neighbors. In such an enviable position there would be no need for a Navy since there would be no trouble-makers. Naval needs are relative and depend in large part on the risks of war entailed by the policies of other powers.

A glance at the United States makes it difficult indeed for anyone to prove that our naval establishment is too big. We are flanked by two huge oceans on either of which we might have to exert our maximum naval effort. The rapid transfer of the fleet from one coast to the other depends on the Panama Canal, which is probably the most vulnerable place in the world. If we wanted to be perfectly consistent, we would require a Navy on each coast.

But this theoretical maximum has not been the American policy. Instead we have adopted the policy of equality with the strongest—and the strongest navy today is the British Navy. Historically speaking, this is far from an extreme policy. Great Britain in the past acted on the theory of having her Navy stronger than those of all the other navies of the world lumped together, which theory in more recent times became the two-power standard. Our policy of equality with the strongest is, of course, a very great guarantee of security, although it obviously would not be adequate for a war in which we were attacked by several naval powers. It cannot, by any fair standard, be called anything but moderate.

The policy of equality, or parity as it is usually called, has, however, been decided on and was agreed to by Prime Minister MacDonald, who told the United States Senate that as far as Great Britain was concerned we could have parity "heaped up and flowing over." It is therefore pertinent to inquire whether parity, having been agreed to in theory, exists in fact. If this question is to be answered correctly, it must be first realized that sea power, in the established use of the term, does not consist of the fleet alone. Entering into it are two other factors of equal, if not greater, importance. These other two factors are naval bases and the merchant marine, and in both these factors we are vastly inferior to the British.

When Messrs. Hoover and MacDonald speak of Anglo-American parity, therefore, they refer only to fleet parity and not to parity in the fundamental elements of sea power. Fleet parity we shall probably obtain, although we have not got it now, for in January, 1930, the modern vessels of the two fleets stood as follows:

Class	UNITED STATES		BRITISH EMPIRE	
	Number	Tons	Number	Tons
Capital ships	18	523,400	20	606,450
Aircraft carriers	3	76,286	5	92,850
Cruisers	11	80,500	54	327,111
Destroyers	223	226,313	150	157,585
Submarines	76	59,738	53	47,421
TOTAL	331	966,237	282	1,231,417

This table does not include ships building, appropriated for, or authorized. The capital ships are determined by the Washington Treaty and so are not subject to change. Moreover, we have cruisers under construction, authorized, and appropriated for which would bring us much closer to the British strength in that category. Our large quantity of destroyers may be attributed to the late War when the American fleet acted jointly with the British, and destroyers were essential to protect convoys from submarine attack. These destroyers would be relatively useless to us if we were engaged in a war by ourselves. At the present time large quantities of them are laid up in port.

Big battleships and cruisers are preëminently to our advantage for strategic as well as economic reasons, since a battleship or a long range cruiser can go farther without refueling than can any other type of naval vessel. If we had naval bases all over the world as Great Britain has, this requirement would not arise and small cruisers would do the trick. But we have a trade which extends everywhere, and we must therefore have ships which can go everywhere. Now, naval warfare usually takes one of two forms—either the two fleets meet with their complete complement of battleships, cruisers, destroyers, etc. and hammer away until a decision has been reached, or else dispersed warfare is undertaken against the enemy's commerce. This consists in cruisers wandering around the Seven Seas, capturing or sinking enemy vessels. If a nation has naval bases, these cruisers need not devote a large part of their space to the carriage of fuel and supplies, but if a nation, like the United States, has very few bases, ships must be made large enough to stay at sea for long periods. So it was that before the Washington treaty the United States built several cruisers of about 14,000 tons. But at the Washington conference the limit for cruisers was set at 10,000 tons. Therefore any further reduction from that figure would certainly be to our disadvantage.

Let us assume for purposes of illustration that the United States and Great Britain each wish to maintain two cruisers at the following four stations: Gibraltar, the Cape of Good Hope, Singapore, and Panama. As the preceding quotation has shown, this would take more than eight cruisers each because ships would have to leave the station for refueling and repairs. The advantage accruing to the power with bases over the power without them may be expressed in the following table:

	BRITISH CRUISERS		
	On station	Absent from station	Total
Gibraltar	2	1	3
Cape	2	1	3
Singapore	2	1	3
Panama	2	3	5
TOTAL	8	6	14

	AMERICAN CRUISERS		
	On station	Absent from station	Total
Gibraltar	2	3	5
Cape	2	6	8
Singapore	2	2	4
Panama	2	1	3
TOTAL	8	12	20

On such a basis, therefore, twenty American cruisers are the equal of merely fourteen British cruisers. This may perhaps show how difficult a matter it is to determine what parity really is.

Where outlying naval bases are concerned, the United States has seven to the British twenty-six. It is interesting to note that the British have four bases in western Atlantic waters whereas we have none in eastern Atlantic waters. Our outlying bases are either in the Caribbean or in the Far East. In middle and near eastern waters or in the vicinity of Europe or Africa, we have none at all. The question of acquiring more bases has not been considered enough from a strategic standpoint to make a definite opinion possible. From a commercial standpoint, however, there is already something to be said for it. As the accompanying chart shows, we are becoming more and more independent of foreign bottoms for the carriage of our foreign trade. We have, fortunately, learned that lesson from the World War when our utter dependence on foreign ships was so large a factor in bringing us in. This increasing American merchant marine going into every corner of the globe would undoubtedly profit by having ports of call here and there under the American flag. Human nature being what it is, it is only natural for American ships to get treatment in foreign ports inferior to that received by citizens of the country to which the port belongs. Delays and discrimination are bound to occur, and these cost money.

The third item of sea power is the merchant marine, and here our inferiority to the British is also pronounced. This explains why fleet equality with the strongest does not mean sea power equality with it. Public attention centers on the fleets because war vessels are specially constructed by the government for a special purpose. Where general warfare is concerned they are, however, only a small part of the total. Nearly everything that a nation needs in time of peace is a source of strength in time of war. Food and clothes are indispensable in war, and it was largely because the British and American navies stopped the Germans from getting food that they gave in. Pushing the subject a little further, automobiles and airplanes would be invaluable in time of war, yet no one talks of limiting them because their use in time of peace is so much more obvious to most persons than that of the Navy.

Merchant vessels are in this class—valuable for war but not subject to limitation because of their usefulness in time of peace. But if all navies were abolished, the naval importance of merchant ships, especially when armed, would at once be apparent to everyone. So it is that the more navies are reduced, the more importance attaches to the merchant marine. In the War of the Revolution we had practically no Navy but we had many naval actions fought with commercial vessels.

The research division of the United States Shipping Board shows that Great Britain's ocean-going merchant tonnage is nearly twice that of the United States. Discouraging as this may seem, it is a great deal better than it used to be and should improve still more if Americans take the lessons of recent history to heart.

It is interesting to note that in 1830, 89 per cent of our foreign trade was carried in American ships. This fell to 8.7 per cent in 1910 and stood in 1928 at 33.3. Our total number of merchant ships as of January 1, 1930, was 1,695, aggregating 9,526,108 tons as compared with 3,034 British ships aggregating 18,057,236 tons.

Merchant vessels which would be useful in time of war should have an individual gross tonnage of 4,000 tons or over, with a speed of 15 knots. This type might be utilized as cruisers or armed transports. Of this class of ships the United States has 83, with an aggregate tonnage of 884,064, and Great Britain 245, with an aggregate tonnage of 3,170,603. Britain thus has a superiority in convertible merchant vessels of about 3 to 1.

In making these constant comparisons between the United States and Great Britain nothing invidious is intended, for it is my conviction that relations between the two great powers have never been as good as they are today. They are made because the two governments have agreed on parity, and parity with the strongest is today the naval policy of the United States. The foregoing, therefore, seems to show that while our two fleets may ultimately be in the ratio of 10 to 10, where naval bases are concerned the ratio is 2.6 to 10 and where merchant marine is concerned the ratio is 3.3 to 10. Instead of having parity in sea power, the average relationship of all three factors, figured on an equal basis, makes the ratio one of 5.3 to 10. Such is the true picture of things as they are—on the assumption that our naval fleets are equal which, as shown above, they are not. (For a curious note in public opinion, see page 146.)

The cost of the Navy

The question of what a certain governmental activity actually costs is nearly impossible to determine, and the difficulties of doing so with regard to the Navy are well exemplified by the current discussions on how much "we spend for war"—a broad and nearly meaningless phrase. A favorite way of estimating this is to take the total annual expenditures of the federal government and then to add up the service on the national debt, the sums paid for pensions of past wars and the current War, and Navy Department appropriations. These are then called "expenses for war" and amount to about 72 per cent of the federal total. From this it is an easy, if inaccurate, step to the saying: "Americans spend 72 per cent of their governmental income for war."

The question of what the Navy costs should be discussed on a rational rather than on an emotional basis. To begin with, the United States is a federal republic and not a centralized state like France or Great Britain. In those countries the expenses emanating from London or Paris give a fair idea of the total governmental expenses of the nation. The federal figures by no means give an accurate idea of the total governmental expenses of the United States. Our state and local governments, in the aggregate, spend about twice as much as our federal government does.

The latest reliable figures available on the cost of government in the United States are those of the National Industrial Conference Board, Inc., for 1927. The following table shows our federal, state, and local expenditures for 1913 in 1913 dollars and for 1927 in 1927 dollars:

	1913	1927	Increase	Percentage increase
Federal	\$ 692,000,000	\$4,069,000,000	\$3,377,000,000	488
State	383,000,000	1,656,000,000	1,273,000,000	332
Local	1,844,000,000	6,454,000,000	4,610,000,000	250
	\$2,919,000,000	\$12,179,000,000	\$9,260,000,000	317

This somewhat appalling increase in the cost of government is lessened by the fact that the 1927 dollar is worth only a fraction of the 1913 dollar. Using the wholesale price index for 1927 which, according to the Bureau of Statistics of the Department of Labor, is 146.8, the total expenditures for the years 1913 to 1927, in 1927 dollars, are as follows:

	1913	1927	Increase	Percentage increase
Federal	\$1,016,000,000	\$4,069,000,000	\$3,053,000,000	300
State	562,000,000	1,656,000,000	1,094,000,000	195
Local	2,706,000,000	6,454,000,000	3,748,000,000	139
	\$4,284,000,000	\$12,179,000,000	\$7,895,000,000	184

SEA TRADE STATISTICS

COMMODITIES OF PEACE

A large industrial nation without free and guarded access to the sea is an organism without space to breathe in. That America is a great exporting country is a truism; that it is also a great importing country is less generally and completely realized. Our imports in 1929 exceeded the four billion mark for the fifth consecutive year; their total value was 7½ per cent higher than in 1928, in spite of the drop in price of nine leading commodities (coffee, sugar, rubber, hides and skins, newsprint paper, crude petroleum, coconut oil, copra, and tin). Record-breaking imports included silk (87,000,000 pounds), crude rubber (1,263,000,000 pounds), newsprint paper (4,845,000,000 pounds), cane sugar (9,770,000,000 pounds), and tin bars and blocks (195,165,000,000 pounds). Follows a table of import and export values for 1929:

IMPORTS		EXPORTS	
Raw silk	\$432,340,000	Cotton, unmanufactured	\$770,830,000
Coffee	302,397,000	Automobiles, other	
Rubber	247,421,000	vehicles	588,023,000
Sugar	229,663,000	Petroleum	561,178,000
Paper, newsprint	163,184,000	Grains and preparations	286,354,000
Petroleum and products	143,545,000	Industrial machinery	277,754,000
Hides, skins	137,281,000	Tobacco manufactures	165,625,000
Furs and manufactures	122,529,000	Agricultural machinery	140,801,000
Paper base stocks	118,133,000	Fruits, nuts	137,467,000
Copper	104,306,000	Electrical machinery	121,365,000
Jute and manufactures	95,989,000	Animal oils and fats	117,714,000
Tin	91,839,000	Cotton, manufactured	111,216,000
Vegetable oils, inedible	91,819,000	Sawmill products	110,628,000
Wool, unmanufactured	87,344,000	Coal and related products	106,151,000
Fruits and nuts	86,648,000	Iron and steel	
Art works	82,106,000	manufactures	104,148,000
Precious stones, pearls and imitations	79,650,000	Steel mill products	96,046,000
Oilseeds	79,335,000	Iron and steel, advanced	
Fertilizers	72,340,000	manufactures	87,003,000
Wool manufactures	64,869,000	Rubber manufactures	76,963,000
Cotton manufactures	63,454,000	Office appliances	53,754,000
Tobacco and manufactures	60,618,000	Leather	42,947,000
Sawmill products	54,159,000	Wood manufactures	40,934,000
Cotton, unmanufactured	53,333,000	Furs and manufactures	39,504,000
Flax, hemp, etc.	50,890,000	Paper manufactures	37,380,000
Vegetables & preparations	47,797,000	Fodders and feeds	32,715,000
Leather	44,559,000	Photographic goods	31,566,000
		Naval stores, gums, etc.	30,998,000

COMMODITIES OF WAR

Better able to support ourselves than France or England, we are far from self-sufficient in peace or war. FORTUNE prints, for the first time, an official tabulation of war-time necessities together with the countries of their origin.

TRADE REGION	PERCENTAGE OF U.S. SUPPLY FROM THIS REGION	MILITARY USE
ASIA, EAST INDIES		
Antimony	67	Munitions, bearings
Camphor	96	Aircraft, medicinal uses
Jute	86	Sandbags, food containers
Manila fiber	100	Cordage, rigging, ropes
Rubber	85	Tires, gas masks, boots, etc.
Shellac	86	Varnish for fuses, electrical devices
Silk	90	Cartridge bags, parachutes
Tin	66	Food containers, bearings etc.
Manganese	14	Steel, chemicals, batteries
EUROPE		
Manganese	30	Steel, chemicals, batteries
Nickel	85	Gun steel, armor plate, ammunition
Quicksilver	51	Fulminate, paint, batteries, medicine
Quinine	81	Medicinal uses
CARIBBEAN		
Coconut shells	92	Absorbent for gas masks
Sugar	61	Food
Sisal	74	Ropes
EAST COAST OF SOUTH AMERICA		
Manganese	22.5	Steel, chemicals, batteries
Coffee	72	Food, stimulant
WEST COAST OF SOUTH AMERICA		
Nitrates	40	Explosives, chemicals
Iodine	76	Medicinal uses

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The percentage increase is thus something less than half of what it appeared to be before allowance was made for the purchasing power of the dollar. So it is that during a period when the population of the United States increased from 96,512,407 to 118,620,000, or 23 per cent, the total costs of government increased by 184 per cent. Where the cost of government had been \$44.39 per capita in 1913, it had increased to \$102.69 in 1927.

Out of a grand total, therefore, of more than \$12,000,000,000, the total military expenditures were \$600,000,000, or about 5 per cent. Compare it with the largest governmental expenditures listed here in the order of their size, as given by the National Industrial Conference Board:

Public education	\$2,344,000,000
Highways	1,708,000,000
Social welfare	1,108,000,000
Cost of general government	866,000,000
Public services (including postal deficit)	617,000,000

Then compare the increase of some \$220,000,000 in our military expenditures with the increase in our governmental expenditures for other purposes of \$7,895,000,000. The other expenses have increased thirty-five times as much. Where the general cost of government has gone up 184 per cent, that of our national defense has increased 59 per cent. Putting it in another way, while our military expenditures increased \$1.16 per head—and of this only 74 cents per head is for naval expenses—our other

expenses increased \$62.12 per head. Surely a people whose national wealth is close to \$400,000,000,000 and who spend over \$12,000,000,000 on its government as a whole need not be overexercised by this comparatively slight increase in the means of self-protection. And surely those who talk of “the crushing burden of naval armament” cannot be talking of the United States—or they have not taken the trouble to look up the facts, for the facts show that naval armaments cost less than 3 per cent of our non-military governmental expenditures.

There is one more consideration with regard to the cost of the Navy which should be mentioned. When expenses “on account of war” are mentioned, it is the custom among certain persons to include the national debt and the pension for veterans of past wars. But does this give a true picture? Of course the pensions would not be paid if the war had not been fought, but it is equally true that they would not be paid at all if the war had been lost and the nation had been either ruined or destroyed. The statisticians can total up the cost of the Civil War as high as they like, but it is safe to say that no total they can reach will look very big when compared with the value of the existence of the United States. The War of the Revolution may have been frightfully expensive, but most Americans will incline to the view that it was on the whole a profitable proposition.

The late War afforded an apt lesson of how expensive it sometimes is to be without an adequate Navy. The cost of the War to the United

States is usually estimated at \$25,000,000,000. Yet in the words of Colonel Edward M. House, who had probably a closer contact with the underlying facts of the War than any other American, “Given a large and efficient Army and Navy the United States would have become the arbiter of peace and probably without the loss of a single life.” Experience eventually converted so pronounced a pacifist as the late President Wilson to the value of a Navy as a peace preservative, somewhat as in the past Thomas Jefferson had also become converted.

In both the small and the large sense, the United States Navy is the protector of American business. Its gunboats on the Yangtze protect the ships of an American oil company, its cruisers off the Shanghai bund mean that American citizens can trade and live peacefully far from home, and its marines in the Caribbean guarantee to the fruit grower and trader as great a degree of justice as natural conditions allow. The presence of an American Navy is assurance to the millions of Americans dependent in one way or another on the automotive business that they will have rubber tires. It insures at a remarkably cheap rate a foreign trade of nearly \$10,000,000,000 and overseas interests of some \$50,000,000,000—which, by the way, is more than the whole country was worth fifty years ago. Finally, it is the best method yet devised for protecting American civilization, the United States of America, and all the vast, imponderable things which are thus entailed.



Courtesy of E. I. du Pont & Co., Inc. & Naval Historical Foundation

THE SIXTH BATTLE SQUADRON, PART OF THE GRAND FLEET, LEAVING THE FIRTH OF FORTH, BY BURNELL POOLE

Capital Ships

BATTLESHIP design as a fine art came to a sorrowful conclusion in 1921 when the Washington Arms Treaty imposed limitation of capital ships upon the five primary naval powers of the world. Barred from practicing their profession in its rarest form, architects of the United States Navy produced plans for standardized 10,000-ton cruisers, into which they could inject about as much inspiration and individuality as into a Ford car. They watched the terrific dreams they had incorporated into a new type of gigantic battle cruiser junked to produce the grotesque graceless aircraft carriers *Lexington* and *Saratoga*.

The Washington Treaty left the United States Navy with eighteen capital ships, a battle brood spawned as twins and triplets over a dozen years. This first line fleet is today obsolete in the absolute, would be obsolete, in fact, if battleship design had been permitted to go forward unchecked at the same rate of speed as before

1921. If these eighteen ships steamed out to a set sea battle tomorrow, they would fight under technical conditions approximating those of the last War—a sort of *Merrimac* and *Monitor* encounter transposed into the Spanish War. But no handicap would be involved in such an engagement, because the U. S. capital fleet is, relatively, as effectively modern as any adversary.

The oldest ships of the U. S. fighting line were not new when they led the Atlantic Fleet to Vera Cruz in 1914. The youngest have never heard a war-time shot. In the twelve years between, the Navy made major technical advances. Nine thousand more tons were put into each ship. Overall length was stretched 100 feet. Gun calibres were increased four inches; armor plate was thickened by five inches. The bow cut was reversed. Secondary gun recesses were smoothed out of the hulls. The cage mast ceased to be an experiment, and fire control tops grew steadily heavier. Only in capital ship speed did the Navy fail to make any appreciable advance. Today, as in 1911, twenty-one knots remains about the maximum average.

Biggest, newest, best of U. S. dreadnaughts are the *West Virginia*, *Colorado*, and *Maryland* (average age: eight years). They alone carry

sixteen-inch guns, set in pairs in four turrets, which can toss a broadside 33,000 yards. Their bows are whittled away like a racing yacht's; their sterns are almost flush with the water. On them electricity does everything from driving their four great screws to operating the mess potato peeler and ice cream freezer. They are readily distinguishable from older classes by their two small insignificant funnels and their cage (mesh) masts, the forward one growing out of a massed pile of bridges, and both surmounted by heavy fire-control tops.

The other U. S. capital ships are the *California* and *Tennessee* (nine years old), the *New Mexico*, *Idaho*, and *Mississippi* (twelve years old), the *Pennsylvania* and *Arizona* (fourteen years old), the *Oklahoma* and *Nevada* (fourteen years old), the *New York* and *Texas* (sixteen years old), the *Arkansas* and *Wyoming* (eighteen years old), the *Florida* and *Utah* (nineteen years old). With the *California* the Navy first changed from one to two funnels on battleships, with the *New Mexico* from the cut-back to the yacht bow. Under the London Treaty the *Florida* and *Utah* would probably be scrapped as the oldest ships of the line, thus reducing the U. S. fleet to sixteen battleships.



Courtesy of the United States Naval Academy

THE ARRIVAL OF THE U. S. FLEET AT SCAPA FLOW, CHIEF BRITISH NAVAL BASE, IN DECEMBER, 1917, BY BERNARD F. GRIBBLE

Rufus Lenoir Patterson's Cigar Machine

After \$8,000,000 and twenty years' "grief," the impossible is accomplished. George Washington Hill turns the Pariah into a Virgin. And Cuba revolts.

THE son and heir of William the Conqueror was named Rufus. Why? Because he had red hair. From his father, the founder of the British Empire, he inherited England and was mysteriously shot and killed by an arrow while hunting in New Forest. That was the year 1100, and since that time, which was nearly a thousand years ago, few children ever born Rufus were destined greatly to affect the ways of men, until some fifty odd years ago an aristocratic but somewhat impoverished North Carolina lawyer-planter named his seventh son Rufus after himself—Rufus Lenoir Patterson. Why? Well, in this case, the child did not have red hair but since he was seventh it seemed fitting to give him his father's full name, and if the relation between hair and name had to be established this child did so by having black hair and the middle name of Lenoir, which in French means black.

In each of the years 1910, 1922, and 1929, about 6,500,000,000 cigars were made in the United States (actually 6,810,098,416 in 1910 and a lesser number, 6,425,485,322, in 1927). But while there was little change in the number made, the people who made them were:

1910	22,519 cigar factories
1922	11,576 cigar factories
1929	(circa) 6,000 cigar factories

Why? Because at a cost of \$8,000,000 and twenty years' unimaginable "grief," Rufus Lenoir Patterson had made a machine.

Last year, George Washington Hill instituted his notorious "Spit" campaign for five-cent cigars. Why? Because of his own bold belief that at last the time had come when the ancient prejudice against cigars made otherwise than by hand could be demolished. But, also, because Rufus Lenoir Patterson and his staff of engineers had made a machine.

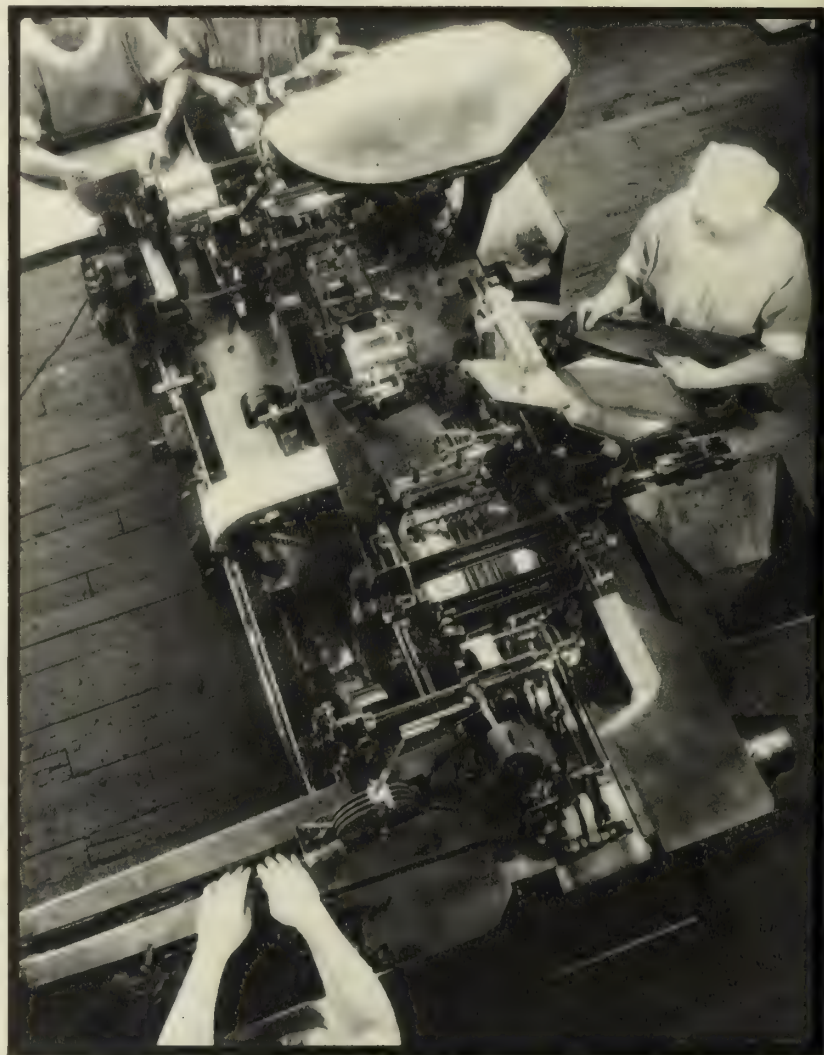
Not only is the machine itself a curiosity of the first magnitude, but also its results recapitulate the whole history of recent economics.

First, as to the machine itself.

In 1898, there was a man named James B. Duke, one of the half-dozen greatest giants of the era. He had already been in existence long enough to rise from absolute destitution to practical monopoly of American smoking. While he no longer exists, his home at the corner of Seventy-eighth Street remains the most perfect on Fifth Avenue and his only daughter, Doris, is the richest girl of eighteen in the world.

To this man Duke there came in 1898 the aforementioned black-haired Rufus Lenoir. Rufus Lenoir Patterson was looking for an industry which was looking for him. And Mr. Patterson had in his figurative sleeve two machines, each of which was of value to the industry owned by Mr. Duke. Mr. Duke virtually owned tobacco. He owned the rights of the cigarette machine, and all cigarettes manufactured in the United States were produced by the machines he controlled. Mr. Duke also owned tobacco fields, manufactured his own cigarettes, and, for the sake of those who preferred to roll their own, a tobacco called Duke's Mixture.

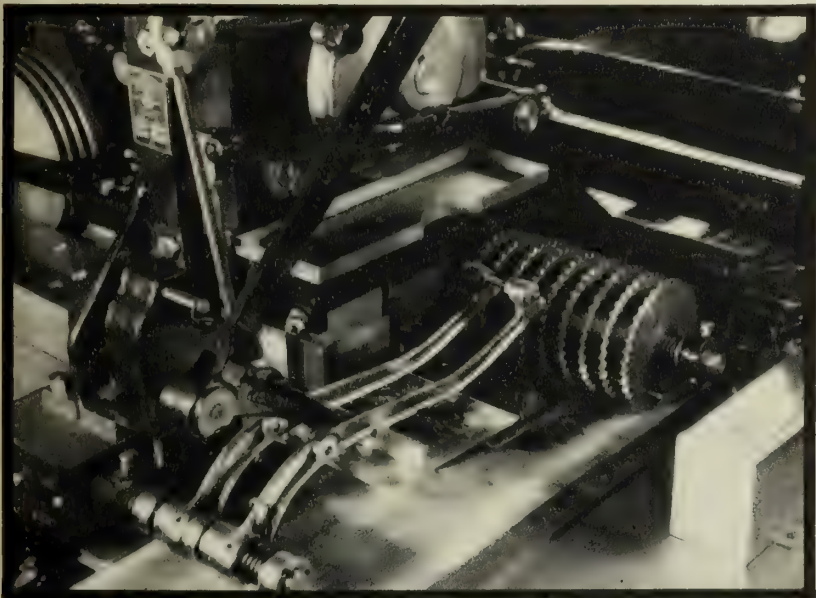
Now one of the machines in Mr. Patterson's sleeve was a machine then and now admirably and economically planned to manufacture just such tobacco bags as the makers of Duke's Mixture used to package their tobaccos. Invented by a William H. Kerr whose London representative Mr. Patterson was for two years (during which time he took courses in machine design), the machine had been improved by Mr. Patterson and remains today one of his outstanding favorites. The other machine automatically weighed, packed, stamped, labeled smoking tobacco. What Mr. Patterson and Mr. Duke said to each other that day in 1898 is not a matter of record but it is said that Mr. Duke ended the conversation with "... Ding it, your machines are all right, but I also must have



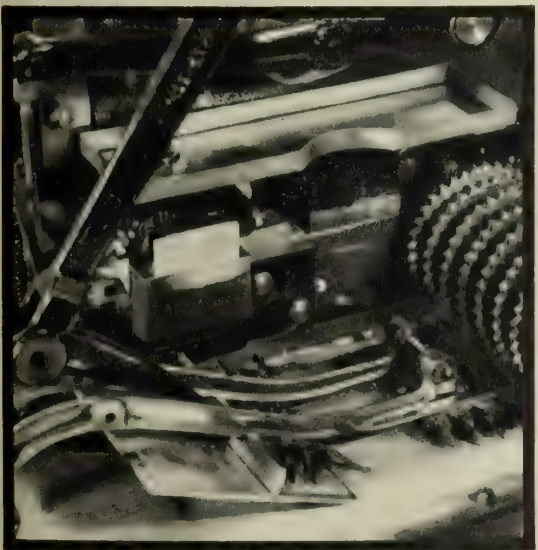
1.—This is an entire cigar-making machine. On pages 57, 60, and 61, FORTUNE attempts to describe its functioning so that anyone can understand it. For identification we pretend that the hands shown at the bottom of the picture belong to Libby Lou. At the right is Annabelle. Of the two girls at the top, the one at the right is Jane. This and the following photographs were taken for FORTUNE by Mr. Arthur Gerlach.



2.—This is Libby Lou putting tobacco leaves into a trough. The leaves then move under the wheel and are pressed into a more or less compact bunch and cut by a knife into lengths approximately equal to the cigar length.

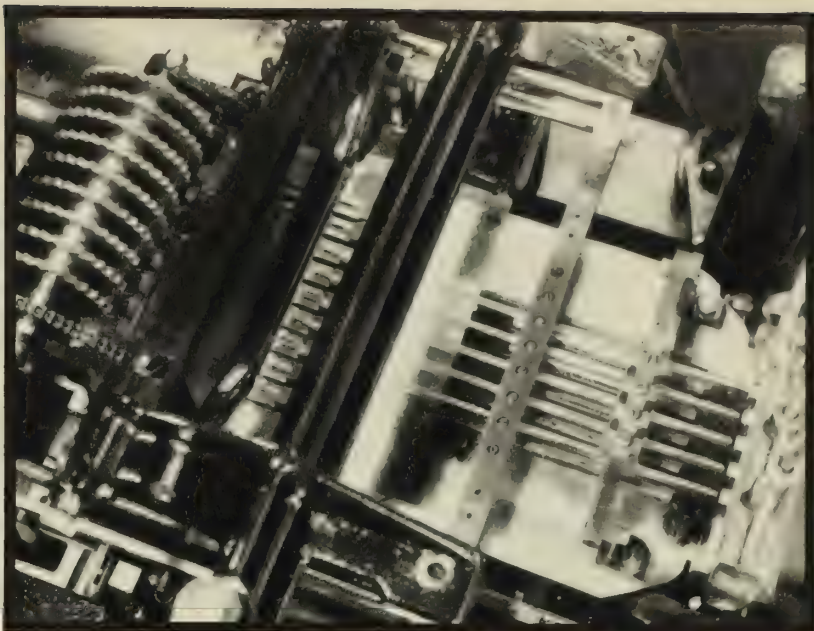


3.—After they have been somewhat pressed and cut (notice Libby Lou's wheel in upper left of photograph), they emerge on a tray . . .



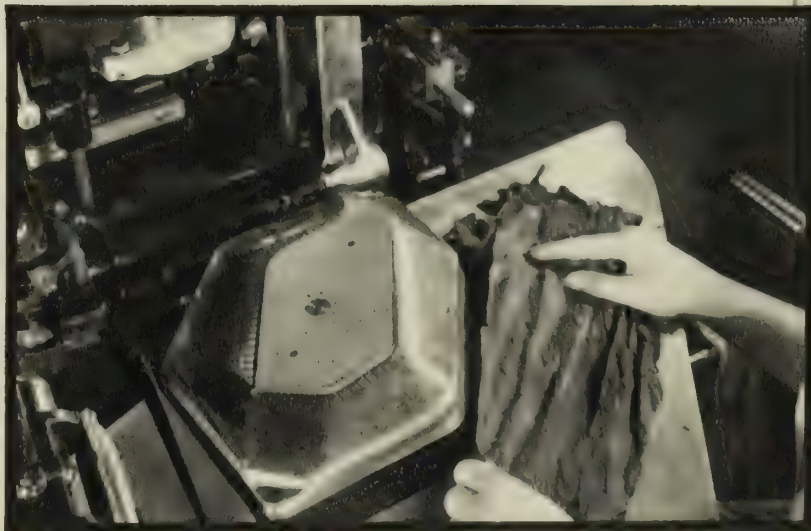
4.— . . . which drops down and a little pusher pushes the bunches (cigar men call them fillers, and they are the insides of a cigar) under another wheel here shown with teeth. Each tobacco leaf differs from every other tobacco leaf in shape and texture. One of the triumphs of the cigar machine is its ability to deal competently with a completely unstandardized raw material.

5.—Here you see the toothed wheel from the top. Right in front of this wheel are little steel fingers (which here you cannot see) that keep the fillers from moving forward until one filler is big enough to force the fingers back. Then that filler moves on and another takes its place. Thus the thickness and actually the weight of each filler is practically standardized. The bar in the center conceals a knife which cuts the filler to exact cigar width. After this, each filler (you can see two of them, center and right) is ready to be the insides of a cigar. (Before any tobacco leaves are given to cigar machines they are cut in the middle by a machine [not shown anywhere on these pages] which removes the stem and divides the leaf into a right hand half and a left hand half. The right hand half is the reverse of the left hand, and it was discovered that the same machine could not handle both. Two machines were therefore evolved, one the reverse of the other, the one for left hand halves, the other for right hand.)



6.—Then the filler drops into a little loop formed by a small rubber belt, about which more hereafter.

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7.—Here is Annabelle and her machine. She puts a large (and better quality) leaf of tobacco on the surface, which looks something like a flatiron.

you." Mr. Duke certainly did say "ding it," for it was Mr. Duke's favorite expression and he hated and never indulged in swearing. Thus it happened that Mr. Duke got the machines and the inventor and improver thereof and shortly thereafter, at twenty-seven, Mr. Patterson became vice president of the American Tobacco Company.

The Duke-Patterson relations were curious. There was the day, for example, when the hard-working, long-houred Mr. Duke became so exasperated with his young engineer's late arrivals at the office that he could no longer contain himself. To the carpet he summoned him and said: "Rufus, I'll not stand for it! You've got to get down to work every day at nine."

"I am sorry, Mr. Duke, but it is quite impossible for me to promise that."

And that, repeated about twice a year, was the only dissent ever recorded in the annals of the Duke autocracy.

Then, of course, there was that other day when Mr. Duke said: "Rufus, four things have always been essential to the tobacco business. So, so, and so . . . and a cigar machine. Let's have it."

There is a quality about Mr. Patterson today rarely found in the great American business man. It is the comic spirit which gives to civilized creatures a capacity for enjoyment of life, including their own antics. In his paneled office, quietly high above Fifth Avenue, not even Time is taken too seriously. If Mr. Patterson is unapproachable, it is simply because he refuses to be bored. Those who do not bore him may stay as long as good conversation lasts. He will not even be bored on the subject of his own business. But recently it pleased him to discuss it and of the cigar machine, this is what he said (a remark which probably cannot be paralleled in the entire bibliography of American business), "If," said he, "if I had had the least idea of the trouble that machine would cost, it would never have been made."

The difficulties are obvious enough. That they should be overcome without undue trouble testifies to contemporary faith in the mechanical perfectibility of anything. Logically the cigar machine is impossible. A fabricating machine presupposes standardized raw material. You cannot put tree stumps or even pulp in at one end of a printing press and expect to get a newspaper at the other. You must put in the standardized paper. So with the cigarette machine. For it, tobacco is chopped up so fine that for practical purposes it is standardized raw material. But the cigar must be made with a filler, consisting of big pieces of tobacco of millions of different shapes and sizes, enclosed in a binder, which must be all one piece (and no two pieces are alike), enclosed again in a wrapper, also one big piece, just as God made it and the sun dried it. Nature never made two tobacco leaves exactly alike in form, size, thickness, pliability, strength, texture, hygroscopicity, all of which attributes play an important part in the manufacture of cigars. Furthermore, Nature did not make the climate in the northern countries like the climate in the subtropics, and the machine must operate anywhere.

However, the years pass, and it is 1919. The War is over and war-fed Labor is rambunctious. In Boston Waitt & Bond, who make Blackstone

cigars, are told by the (then) potent Cigar-makers' Union that wages must again be raised or—there'll be a strike. Thereupon President Waterman buys some land in Newark, New Jersey, builds a small factory, installs four machines although he is told they are still imperfect. He makes a test: good enough. The Union can go to the devil; the Boston hand-factory is closed. Within a year President Waterman is making more and better Blackstones than ever (a Havana long leaf filler with a Sumatra wrapper). Today he has 126 machines, each capable of popping out 1,000,000 cigars a year.

There had, of course, been partial achievements on the long road from 1898 to 1919. What President Waterman had bought (or rather leased) were the first "Fresh Work Cigar Machines," that is, machines capable of taking in plain ordinary cured tobacco at one end and delivering at the other end the oddly shaped package which mankind has determined shall be known as a cigar.

Also we must note that during this period there had occurred, besides a War, the Battle of the Trusts. In 1911 the American Tobacco Co., a thorough-going trust if there ever was one, was dissolved. Its machinery-making was already in 1900 segregated into the American Machine & Foundry Co., of which Rufus Patterson was organizer and has always been president. Since this was the very core of the whole tobacco business, there were, of course, arrangements made whereby all tobacco companies could buy cigarette machines and buy or lease other machines on equal basis.

After 1917, things began to happen faster. Half a dozen independent companies held a series of general conclaves and emerged triumphantly united as the General Cigar Company. At the time of the merger these companies were manufacturing no less than 150 different brands of cigars. Four years after the merger, in 1921, General Cigar was concentrating on only five brands, and their sales had jumped from 450,000,000 to 600,000,000 (and 1921, though a good year for wines, was a bad year for cigars). Of these five brands, one, the Wm. Penn, deserved mention if for no other reason than that its makers shrewdly claim that its conception was due solely to the late Vice President Marshall's remark about five-cent cigars. When that Hoosier smoked his first Wm. Penn he remarked, "By golly, it is a good cigar," and his words thereafter achieved a sort of immortality by appearing on every one of Wm. Penn's many millions of boxes. Then, too, the Congress Cigar Company concentrated on machines and it dared to what no company before had dared, namely, to manufacture only one cigar, the La Palina, today, they will proudly inform you, sold in 85 per cent of the country's retail outlets.

Then came George Washington Hill and "Spit." The machine was getting along very well without him. But it was shy. The mob of smoking-room wiseacres swore you could never fool them with a machine-made cigar. Actually, of course, they were being fooled by millions daily. Blackstones, Wm. Penns, La Palinas, Robert Burns, White Owls, all were machine-made. But the machine did not boast about it. In fact Mr. Patterson tacitly agreed with

all machine-users that he wouldn't tell a soul about their traffic with him. It was left for Mr. Hill to see a great stunt and a great profit in turning the Pariah into a Virgin. "No spit on these Cremo cigars of mine," cried he, referring speciously to a method of sealing cigars by saliva which nearly all hand-manufacturers in the United States had long since abandoned. "They are pure," cried he. "My machine has made them so." And of course it sounded very much as if Mr. Hill's company had shaken the machine out of its sleeve at the precise moment when he, never still for long, was ready to amuse the mob with another stunt, at, of course, the mob's expense. But one thing Mr. Hill certainly is not. He is not futile. His bombs go off. His spit spat. With the result that the making of cigars by machinery is no longer a secret.

A machine will make 1,000,000 cigars per year. That is to say, all the cigars the world uses could be made by 20,000 machines. Actually there are only about 4,500 machines in existence. But nearly all of these are in the United States, so that over one-third of all American production is machine-made. The distribution of machines in the United States is as follows:

Pennsylvania	1,710	Ohio	102
New Jersey	770	Indiana	80
Missouri	364	Massachusetts	56
Kentucky	324	California	22
New York	224	Louisiana	20
Florida	193	Georgia	16
Virginia	142	Minnesota	6
Michigan	128	West Virginia	6
		Iowa	2

The economics of the machine, however devastating, are quite simple. Before surveying its wider aspects, let us take a brief look at the affairs of the company which makes the machine. This company is the International Cigar Machine Co., two-thirds of whose stock is owned by American Machine & Foundry. With 4,000 machines in use by the cigar manufacturers, the International Cigar Machine Co. can make about \$3,000,000 per year. With 6,000 machines in use it can, theoretically, make something less than \$5,000,000. With 20,000 machines in use, enough for the present global production, it can make an amount which makes theory limp. At any rate, the \$8,000,000 is certain to be repaid many fold—and the "grief"? [Continued on page 116]

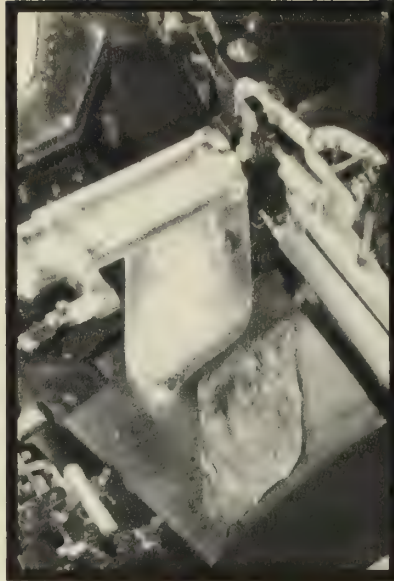
TO THE right is reproduced a portrait of Mr. Rufus L. Patterson by Sir William Orpen. Sir William's early fame as a painter rested largely on his canvas "Hamlet" and his fantastic scenes of Ireland. Lately, however, he has turned almost exclusively to portraiture. Of American industrialists and financiers he has painted Andrew Mellon, George F. Baker, H. P. Davison, General W. W. Atterbury [reproduced in FORTUNE, May, 1930,] Otto Kahn, W. R. Grace, General T. Coleman du Pont. Few other portrait painters receive, as he does, approximately \$15,000 for a commission. Of his American sitters he says: "They are the most model understanding sitters I have ever had. . . . It is really remarkable the wide range of subjects the average American business man can discuss with knowledge."



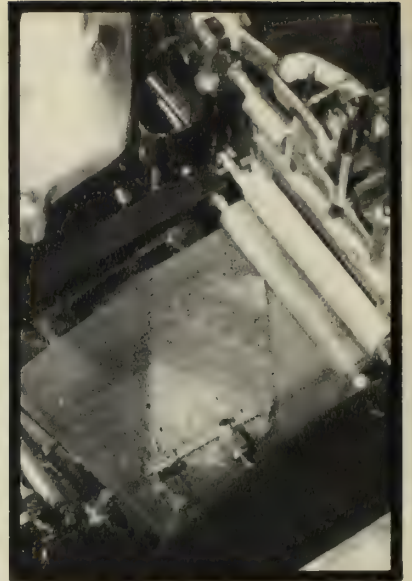
PORTRAIT OF RUFUS L. PATTERSON
BY SIR WILLIAM ORPEN



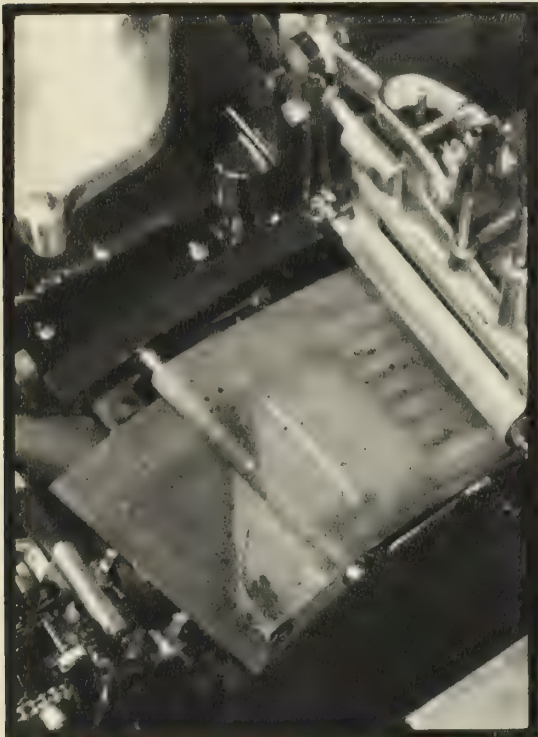
8.—The leaf is held in place by air suction through the little holes you saw in the preceding picture. Then the thing at the top of the picture swoops down on the leaf. As soon as it touches the leaf, the air suction, holding the leaf down, is released; the swooping object begins to suck and therefore picks up the leaf. At the same time the leaf is cut into the shape you can already see outlined on it. Air suction is the only means of holding the leaf in place, and the use of air suction is one of the machine's most unusual features. In good cigars the fillers are made from whole leaves. But in cheaper cigars the fillers are made from so-called scrap, which is chopped up tobacco. The tobacco left over after the cutting shown above is used for scrap.



9.—Then the swooper takes the leaf and drops it on a perforated rubber belt which holds it in place by suction applied through the little holes which are here visible. For the third time now suction has been the main principle of the machine's operation. The rubber belt is the same one of which part made the loop wherein we dropped the filler (see picture 6 on page 57). The leaf shown here is destined to be what cigar men call a binder.



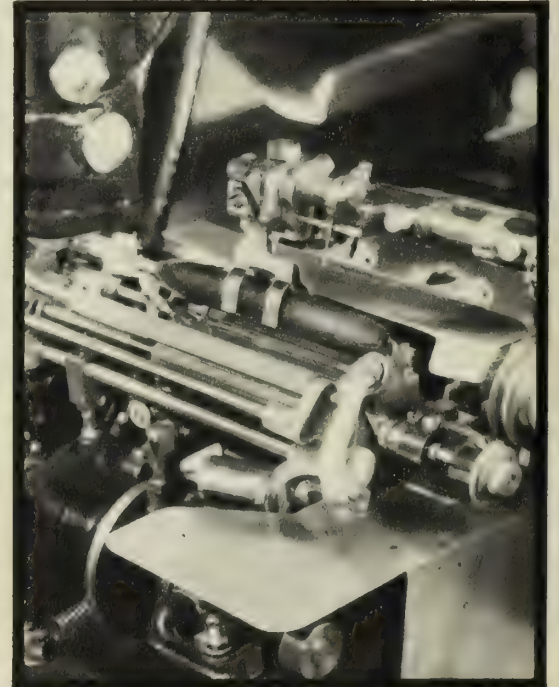
10.—On the corner of the leaf (called a binder) a little roller shown above applies a sort of sanitary glue called tragacanth. In obsolete hand factories, instead of tragacanth, cigar makers were reported to use spit. This practice was made the basis of the recent advertising campaign for Cremo cigars (*Spit is an ugly word*). The campaign originated in the fertile brain of Mr. George Washington Hill, president of the American Tobacco Company.



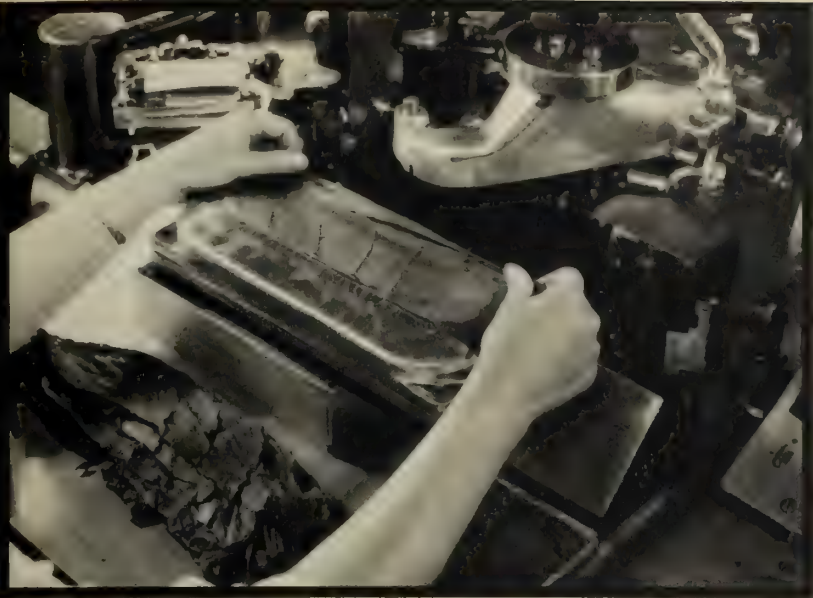
11.—Sleight-of-machine. There is a roller attached to one end of the rubber belt. It formed one end of the loop in picture 6. You see it here rolling toward the left of the picture. As it rolls it drags the loop and therefore the filler of tobacco after it. And as it rolls it also twirls the large leaf of tobacco around the filler. In this picture most of the binder leaf is already around the filler. This operation happens so swiftly that only the most accustomed eye can apprehend what is happening.



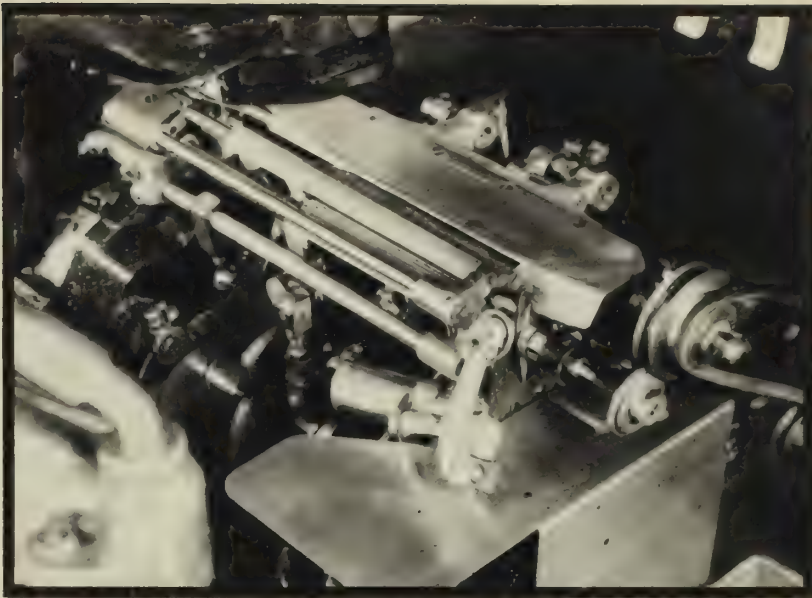
12.—Steel fingers snatch the filler and its binder as it leaves the rubber belt. The cigar is then rolled around the cylinder, thereby making for even distribution of filler within the binder. Then more steel fingers, which here you cannot see, place the cigar between the two molds where you see it now. These molds swiftly spin around and shape the ends of the cigar into points. The making of a cigar, incidentally, takes only six minutes.



13.—Now you see the cigar with ends pointed going between a little set of spinning rollers which in time will twirl it about as its final wrapper is wrapped about it. Wrapping the final wrapper around the cigar is obviously easier than wrapping the binder because by this time the cigar is already shaped like a cigar. On the facing page you will see this operation which again calls for suction. In its reproduction of the entire process of cigar manufacture, *FORTUNE* has attempted to show it as the eye perceives it and has therefore not retouched any of Mr. Gerlach's photographs.



14.—This is Jane with a machine nearly like Libby Lou's, except that the shape cut out of the tobacco leaf is different and the quality of leaf is better. Sumatra leaves are unquestionably the most popularly used as wrappers for good cigars.

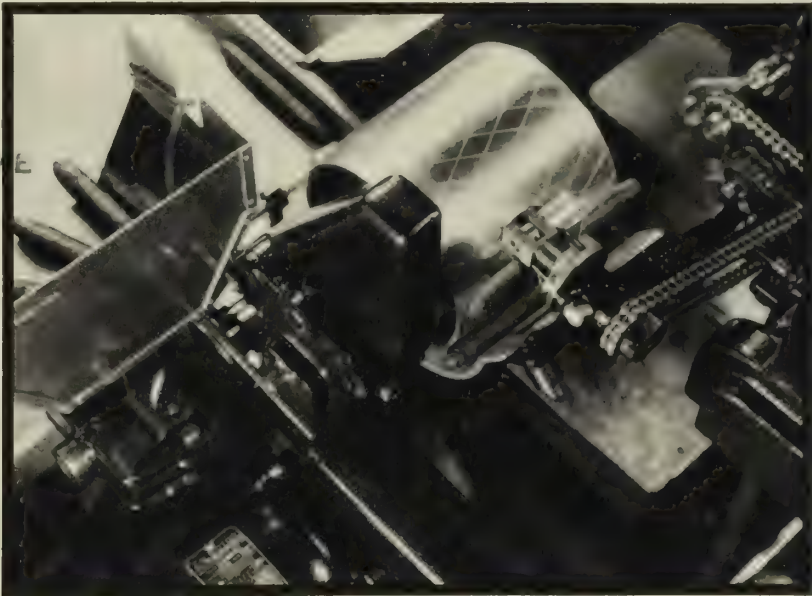


16.—Here a small rotating two-bladed knife (it somewhat resembles a propeller and you can see it at the right center of the photograph) cuts the wrapper exactly to fit the end of the cigar.



15.—(Above). As in the case with Libby Lou's machine, a swooping thing sucks up the tobacco leaf and places it not on a rubber belt (as shown here) but on the rollers where we left the cigar. A needle (you can see it between the two rollers), catches an end of the tobacco leaf, transfers it to the end of the cigar (which, remember, is twirling around on account of the spinning rollers), and holds it there till an overlap of the leaf has been made around the cigar. Then the needle withdraws, and the cigar wraps itself in Jane's leaf of tobacco which, incidentally, is called a wrapper.

BURLINGAME
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LIB.



17.—(Above). After the wrapping, the ends of the cigar are again neatly cut by a knife and again (as shown here) the cigar is rolled around a cylinder which smooths the wrapper. Often after this operation the cigars are wrapped in silver foil or cellophane.



18.—To the left is a picture which needs no explanation. The cigars shown are anonymous, but they might as well have been any of a half dozen most famed U. S. brands. All the photographs shown on this and the preceding pages were taken at the American Machine & Foundry Company plant in Brooklyn, New York. This company and its subsidiary, the International Cigar Machinery Company, are not cigar manufacturers. But for purpose of testing their machinery, they operate under a cigar manufacturers' license and purely for experimentation and research duplicate in Brooklyn the operations and cigars of all the world's leading manufacturers.

Rembrandt's Painting of Solomon's Mother

Only the French Revolution impaired this investment. In less than two centuries its value increased 2,000 per cent.

SASKIA VAN UYLENBORCH, a plump and lovely Frisian, was the wife of Rembrandt Harmens van Rijn and the mother of four of his children. It is quite well established that she also appeared as the wife of David and mother of the fabulous Solomon in a painting by her talented husband. Rembrandt was, patently, fascinated by the story of Bathsheba—how David sent her first husband, Uriah the Hittite, into

the forefront of the battle so that adultery might be conveniently prosecuted, how Uriah perished and David was tortured by remorse until he had begged forgiveness of the Lord. The succinct, conservative biblical account of this affair was well calculated to invite more explicit enlargements: "And it came to pass in an evening-tide, that David arose from off his bed, and walked upon the roof of the king's house; and from the roof he saw a woman washing herself; and the woman was very beautiful to look upon." (II Samuel 2:2)

And so Rembrandt, impelled to paint the beauties which had eased a king's insomnia, paid his wife the delicate compliment of producing a Bathsheba in her golden image. It was completed in 1643, the year following Saskia's death. The artist himself was then only thirty-seven. Perhaps Saskia's passing left him more than ever dependent upon his work for satisfaction. At any rate, this *Toilet of Bathsheba after the Bath* exhibited a splendid confidence in design and a technical perfection which were uncommon in his work of this period, which presaged, rather, those qualities he was to achieve in his bitter maturity when the only joy left him was the practice of his art.

The *Toilet of Bathsheba* is extraordinary in another respect; it is one of the few paintings, now adjudged important, whose economic history is reasonably complete. The markedly human process by which man gradually invests those objects whose great value is indefinable with a value which he can appreciate and compute, money value, is easily traceable in the case of this canvas.

In the year 1734

In 1734, ninety-one years after the *Toilet of Bathsheba* was painted, Holland was a country vastly changed from the Holland of Rembrandt's time. If it be true that the complexion of a nation changes with the passing of its great individuals, then consider what changes had been wrought by the death, not only of Rembrandt, but of Spinoza and of William III of Orange. With the demise of the last, Holland had ceased to be a world power. Its noon of influence was done. The heirs of the commercial adventurers who had filled its coffers and borne its flags throughout the world lounged by the sluggish Amstel in Amsterdam and spent their grandfathers' earnings on the decorations of idleness. But the connoisseurship which usually accompanies such decadence was not theirs. Rembrandt, for instance, and his vigorous ilk had long since been repudiated in favor of such pallid performers as van der Werff. And this senile

placidity of the Dutch did not entirely conceal the very real, grave decay of the national tissue which underlay it all; collapse was imminent; its heralds had already made themselves heard.

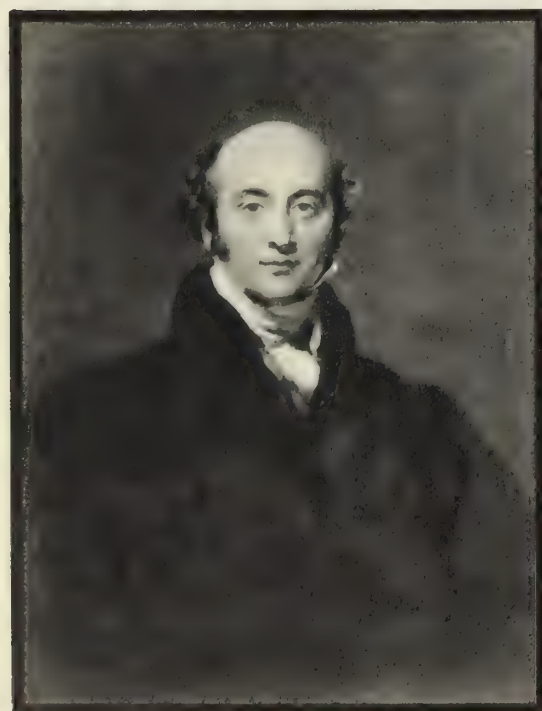
It was in 1734, in these diseased, uncomfortable times, that the *Toilet of Bathsheba* was first sold—by Willem Six, in Amsterdam, for 265 florins (\$106). (All evaluations in dollars are necessarily only rough approximations.) This



REMBRANDT'S PORTRAIT OF JAN SIX



VIGÉE LEBRUN—SELF-PORTRAIT



Courtesy Metropolitan Museum
SIR THOMAS LAWRENCE—SELF-PORTRAIT



Courtesy Metropolitan Museum
BENJAMIN ALTMAN BY ELLEN EMMET RAND



Courtesy Metropolitan Museum

THE TOILET OF BATHSHEBA—REMBRANDT VAN RIJN

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LIB.

was by no means an extraordinary price for a fine painting. Almost a century previously (1642) when the Duke of Buckingham's pictures were sold, a Tintoretto brought 1,000 florins, and a Titian 400. Especially pertinent are these examples because the interval between the sale of the pictures and the death of the artists was approximately the same as that between the sale of Bathsheba and the death of Rembrandt (sixty-five years).

Willem Six was a descendant of the wealthy burgomaster-poet, Jan Six, friend and associate of Rembrandt through his unfortunate years. At dinner at the Sixes, Rembrandt once completed an etching, on a wager, while waiting for a torpid maid to produce a pot of mustard. Six presumably acquired Bathsheba directly from Rembrandt, possibly at one of those tragic auctions to which the painter's goods succumbed. It is inconceivable that Willem, had he been either as financially secure or as esthetically discerning as his ancestor, would have allowed the picture to leave the family. There are culti-

vated Sixes in Holland today, amateurs of the arts, who doubtless regret the fact.

But even though the Republic of Holland was breaking down, the enduring value of the Rembrandt began to be manifest in its increasing cash value. Seven or eight years later, with Holland on the eve of treaty-enforced participation in the War of the Austrian Succession, one Bicker van Zwieten, who had acquired the picture after the Sixes, realized a nice profit by selling it at The Hague for 350 florins (\$140).

It is perhaps significant, however, that no Dutchman gave this price; this time the picture left the country. And it may be said that its international fame was by way of being established. Like a debutante who travels from her sequestered home to the ballroom where she faces the appraising eyes of all society, Bathsheba left congenial Holland and entered the collection of Count Heinrich von Brühl of Dresden, at that time Prime Minister of Augustus III, Elector of Saxony and King of Poland, where she was critically observed by the artistic

and social fashionables of many nations.

1763—Frederick the Great

Count von Brühl was a bad statesman; he appropriated public moneys for private use and is generally credited with the 18th century degeneration of Saxony. But he seems to have possessed a genuine artistic flair. Each morning he consulted a great catalogue kept by his valet to determine in which of his three hundred suits of clothes he would begin the day. And possibly indicative of the family tastes is the fact that his son, Karl Friedrich Moritz Paul, was a good friend of Goethe and intendant-general of the Prussian royal theatres and museums. Certainly when the Count decided to sell the painting which had been so thoroughly ogled by his diplomatic friends, it was not because he did not appreciate its loveliness. Through weal and woe he had kept it, but in 1763 Frederick the Great of Prussia, who hated the idea of women as much

[Continued on page 120]

A Bourgeois Engine

Is the Diesel, comfortably established between aristocracy and proletariat of prime movers.

RUDOLF Diesel, the German engineer who designed the Diesel engine, drowned himself in the English Channel in September, 1913. He jumped from the deck of a Channel steamer because his engine, patented twenty-one years before, had met with scant commercial success. Engineers had accepted it, but *entrepreneurs* were apathetic—and shrewd. They were not sufficiently interested to buy the patent rights from the inventor. They preferred to wait until Diesel's patents expired, which they did in 1912. On that confused and troubled night in September, 1913, things looked not at all promising for the engine's future.

Like many another suicide, Rudolf Diesel jumped at just the wrong moment. Had he waited one year, he would have seen the warring nations rushing the construction of his engines for submarine surface propulsion. He would have seen his great machine started on the upward curve of its meteoric career, a curve that today points more sharply upward than ever before. He would have seen 440,000 horsepower of his engines turned out annually in this country alone. On the sea the Diesel

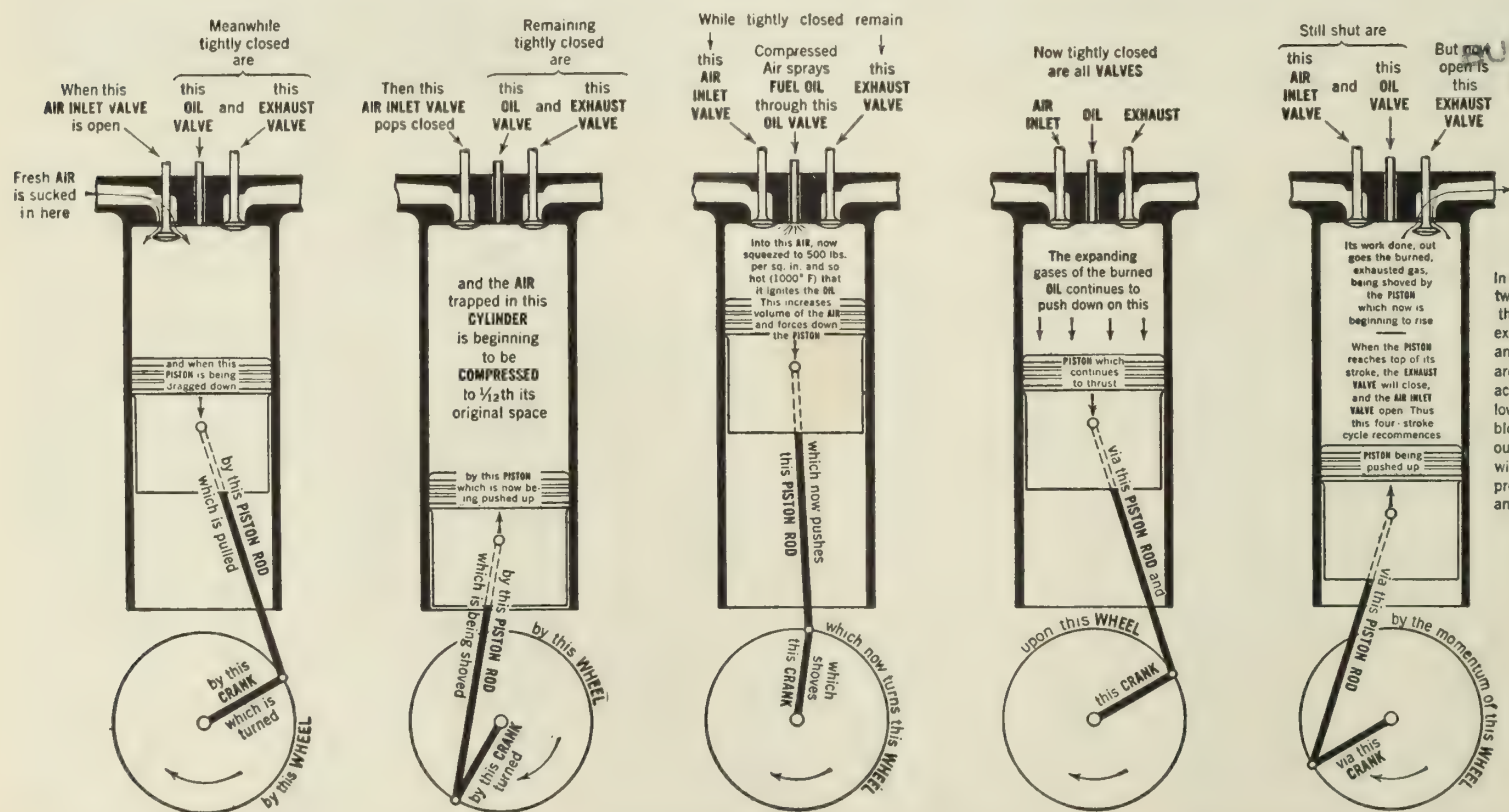
reigns supreme among practically all classes of ships except the superliners. Its most brilliant triumphs are the three motorships, the *Saturnia* and *Vulcania* (24,000 tons each) and the *Augustus* (33,000 tons), built by Italy for de luxe passenger service. Last fall Canadian National Locomotive 9000, driven by electricity generated by Diesel motors, was a nine days' railroad wonder. And this April an even more sensational application of Diesels, to aircraft, was a nine days' aviation wonder. The recent tragic death of the designer, Captain L. M. Woolson of Packard Motors, focused popular attention still more sharply on his engine. Already the Diesel is used on 54 per cent of world shipping tonnage under construction. And now within a year it threatens to make further incursions into transportation by rail and by air.

Great things have been done with Diesels, and great things remain to be done. But there is small prospect of the world's prime movers going completely, or even largely, Diesel. From a horsepower point of view Diesels are the bourgeoisie of enginedom. Below 100 horsepower is the vast and potent proletariat of automobile

engines, each of them small in itself, but in the aggregate the most important group of prime movers. Above 20,000 is the horsepower aristocracy of the great turbines, steam and water, which drive the wheels of industry on land and the propellers of superliners on sea. The Diesel occupies a middle class of from 100 to 20,000 horsepower, which takes in moderate-sized ships, contracting equipment, smaller power plants, pumps, and general industrial uses. This is a broad domain but the automotive and super-power domains are both greater in terms of horsepower. The Diesel is confined to the middle class by a series of limitations, some of them inherent, some of them now being removed by engineers. These limitations, and the peculiar advantages of the Diesel as well, can be understood only by peering for a moment into the mechanics of the Diesel engine.

Both the Diesel engine and the ordinary automobile motor are internal combustion engines, which means they get their power by starting a fire in a confined space. The point of departure between the two is in the methods they use to start this fire. Automobiles do it by putting

This is How Each Cylinder of A Four-Stroke Cycle Diesel Engine Works



THIS MIGHT SERVE AS THE DIAGRAM FOR A GASOLINE ENGINE EXCEPT FOR THE ABSENCE OF SPARK PLUGS. THE OUTSTANDING POINT OF DEPARTURE IS THE ELIMINATION OF ELECTRIC IGNITION

gases under pressure and then striking an actual spark of fire in the cylinder. Diesels do it by compressing the air in the cylinder about 500 pounds a square inch (as against 40 to 90 in automobiles), thus making the air terrifically hot. Oil is then shot into the cylinder. On coming into contact with the hot air it bursts into flames, which expands the air in the cylinder, which forces back the piston, which turns the motor, and so on.

The strong points of this motor are, first, thermal efficiency, which refers to the percentage of heat from the fire that is converted into power. In a Diesel this percentage is roughly about 30 per cent as against a gasoline motor's 20 per cent, a steam turbine's 25 per cent, and a locomotive's 6 per cent. The ability to use low-priced fuel is also important. The high temperature obtained by compressing the air in the cylinder, a temperature of 1,000 degrees Fahrenheit, makes it possible to consume fuel oil or even coal dust satisfactorily, because these fuels at that temperature are completely volatilized and burned at once. Fuel oil is not only cheaper than gasoline (six cents a gallon is a good price) but it is also noninflammable, except at the high temperature produced in the cylinder. Diesels thus eliminate fire hazard.

The limitations of the Diesel are equally definite. For smaller horsepowers, Diesel calibration (fuel measuring) offers great difficulties. Any engineer knows that the mechanics of sucking a vaporized mixture of gasoline and air into a cylinder are much simpler than those of forcing in an infinitesimal drop of oil against a 500 pound pressure. The smaller the horsepower of the engine, the smaller the drop and the more hairsplittingly accurate must be its measuring. As a mass producer of superpower, the Diesel is limited by its very excellencies. The outstanding virtue of the Diesel is its even efficiency at all speeds and all powers. And the Diesel's main handicap in superpower competition is the converse of this virtue: it does not gain efficiency as its size increases. A big turbine does: the bigger it gets, the cheaper it is to build and the cheaper it produces power. Diesel power costs the same per kilowatt no matter what the size of the installation.

Marine engines

An engine with such definite excellencies and such equally definite limitations must have a clearly marked place in the various fields of power. Not Britannia but Diesels rule the waves. They dominate the classes of boats between 50 and 5,000 tons and are extending their dominion into the larger ship class. More economical in terms of weight, of fuel costs, and of both fuel and engine space than steam engines of the same power, they are ideal for yachts and cargo boats. On the very large ships, steam engines (turbines or reciprocating) with oil as fuel produce power cheaper. Especially on the North Atlantic, where the run is compara-

tively short and cargo space not vital anyway, steam is the logical thing. But in smaller boats, on longer runs, with cargo space more important, Diesels are the ideal installation.

When it is necessary, however, as in the case of the *Europa*, to develop 138,000 horsepower to drive 49,000 tons at 27 knots, the Diesel cannot as yet compete with steam. The *Europa*, by the way, admits Diesel's superiority for small power by employing 3,000 horsepower of Diesel to operate its auxiliary services. The first large motorship afloat was the *Selandia*, tried out in 1912 with an engine constructed by the famous firm of Burmeister & Wain, of Copenhagen. Requiring no funnels, the *Selandia* had none, setting a ruinous example for several succeeding passenger ships. So irresistible is the passenger craving for the funnel that the *Leviathan* has one fake smokestack to add to its impressiveness, and all motorships carrying passengers, and many yachts, carry purely ornamental funnels. The *Saturnia*, *Vulcania*, and *Augustus* have already been mentioned as spectacular users of marine Diesels. The mysterious new German cruiser, *Ersatz Preussen*, will include 50,000 shaft horsepower Diesels among its other phenomenal equipment. At the other end of the scale, a domestic company is known to have in preparation an outboard motor of the Diesel type, to sell on its dependability. The most impressive statistic regarding the Diesel's marine ascendancy is this: in 1918 there was built steam tonnage of 3,685,000, Diesel tonnage of 76,000; in 1928, 951,000 steam tonnage was built, 786,000 Diesel.

Electric power

A steam turbine plant supplying a steady load of 25,000 horsepower will make electricity cheaper than a Diesel plant. When a steam unit in such a plant, however, produces only to meet evening peak loads, then labor and fuel will bring the cost of its product above and sometimes way above that of a Diesel, which burns fuel and



Courtesy Packard-Diesel Co.

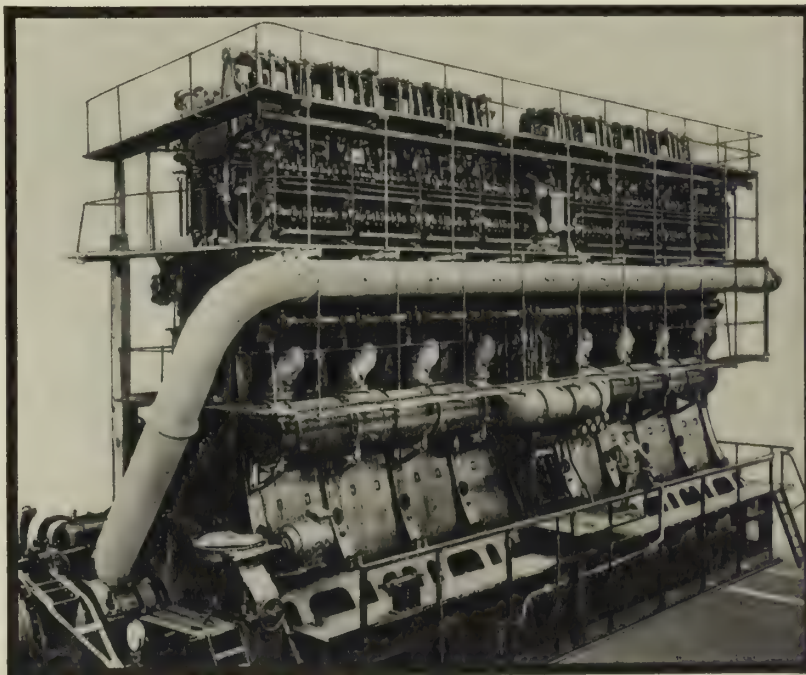
THE 225 HORSEPOWER PACKARD WEIGHS 510 POUNDS

needs care only when producing power. When power has to be delivered to scattered communities over long and expensive lines, then several local Diesel plants of 1,000 to 15,000 horsepower are cheaper than one big turbine plant. For this reason, superpower often makes little progress into small communities already owning Diesel plants. Thus, the town of Menasha, Wisconsin, has successfully resisted attempts to be brought into the superpower system in that area and using Diesels for twenty-five years has been producing power for less than two cents a kilowatt hour.

The utilities themselves have purchased Diesels to carry the heavy evening loads of moderate-sized plants. Power companies who depend on a seasonal water supply may use Diesels to fall back on in emergencies. Such a plant is in operation at Miraflores Locks, Canal Zone. At Tucson, Arizona, where coal costs \$8.00 a ton, where there is no water power in summer, where fuel oil in tank cars costs less than five cents, the power plant of the Tucson Gas, Electric, and Power Company is all Diesel, 11,540 horsepower, largest in the country. A large Diesel installation has just been contracted for by the Consolidated Anglo-Chilean Nitrate Corporation, consisting of five engines, with a horsepower of 28,000.

It is significant that it takes five Diesels to produce this horsepower, which one steam or water turbine could, and does, produce with no trouble at all. And these five cost no less to build per kilowatt and produce power for no less per kilowatt than would one unit, or ten. The turbine, on the other hand, gets bigger and cheaper at the same

[Continued on page 127]



Courtesy "Motorship"

THIS MONSTER MARINE DIESEL OF THE COSULICH LINE DEVELOPS 24,000 HORSEPOWER, WEIGHS 840 TONS



SUNNY JIM was born in 1902 to the Hecker H-O Company, Incorporated, the younger of twin old gentlemen. His elder, Jim Dumps, preceded him by one package of Force. This was in the days before constipation had gone into business and achieved respectability, and the most the Hecker H-O Company, Incorporated, thought fit and proper to suggest about its breakfast food was contained in the contrast between the dismal, melancholy, hypochondriac countenance of the sluggish and Force-less Dumps, and the chipper and energetic visage of the punctual, Force-fed James. Dumps from the start was a failure in life and shortly passed away. James, on the contrary, lived and shone and became a success. So great a success, indeed, that he ruined his family. He doubled the sales of Force in thirty days. A million dollars was appropriated for his exploitation. And in 1903 the company was reorganized. The consequence was that Sunny Jim retired to a corner of the carton from which, with undiminished optimism, he contemplated the best of all possible worlds. In 1927 he was sent abroad. And from that time on he enjoyed two glories—his brilliant past and his frequently remarked resemblance to President James Rowland Angell of Yale.

It is possible that Sunny Jim's work might have ended there. With yeast and bran everywhere making their brazen claims and even in the *New York Times*, with Listerine telling everything down to the last whisper—what could a bright smile possibly signify? James in his corner was as conspicuous in the modern health-food market as the glimpse of a petticoat in a Follies' chorus. Something had to be done. And James did it. He tucked his cane under his elbow, threw his hat into the next column, and raced from the corner of the box of Force to the center of Bran Dandies. Where now, with neither innuendo nor suggestion, but with good round speech, he Tells the World.



THE Old Dutch Cleanser Girl, goddess of household purgation to the Cudahy Packing Company, is a creature of ambiguity. Her face is veiled. Her trade value is shrouded in mystification. But in 1929, her appearances in the advertising pages of the *Saturday Evening Post* cost her protector \$195,000.

She first appeared in a furnished room back of the Omaha Stockyards in 1905. The room was occupied by an unhappy young Austrian immigrant. He was staring at an object on the wall and meditating upon his employer, old Mr. Cudahy, upon certain deposits of volcanic ash in Kansas and Nebraska theoretically suitable for the manufacture of cleansing powder, upon the stupid and hidebound unwillingness of purchasers to purchase anything new, all of which, he perceived, was rapidly producing a million dollar deficit on the company's books. He had meditated for a considerable time when the object on the wall penetrated from his eye to his attention. It was a picture of a little Dutch girl with a stick in her hand. Beyond the stick was a goose. Beyond the goose was a vista of rural Holland. And suddenly all was clear. With the irrefutable logic of inspiration, the unhappy immigrant perceived that Holland was a country famous for the lustrations of its people and that nothing was more calculated to appeal to the preconceptions of powder purchasers than this embattled Dutch girl with her stick. As for the goose, the goose was irrelevant. It was dirt the child was chasing. And so, it appears, it was.

Since then the child has galloped through the world with special titles in Spanish, Portuguese, Chinese, Danish, Japanese, Italian, French, (and French-Canadian!). Her cleanliness has never diminished; her fame has increased. The Austrian immigrant is less widely known.

Five Who Found

Millions they
pay back. Man-made, they

THE Arrow Collar Man has no more resemblance to himself, from one advertisement to the next, than a transmigrating Buddha who moves from the corpse of the head of the local Lamassary to the body of the son of the richest horse trader. What holds him together—what has held him together in his various personifications since 1905—is the pencil of Joseph C. Leyendecker. And the linen round his neck. For twenty-five years Mr. Leyendecker has been infallibly forecasting masculine styles, and for twenty-five years the Arrow Collar Man has been displaying them. He put the campuses of 1910 through the high Clifton, the young men of 1915 through the Gothic with its rounded points, the post-War lads of 1920 through the free and easy Prince, and the well-dressed man of 1925 through the Guards.

He has served as the glass (slightly flattering) of fashion to six college generations and the mould (rigid enough) of form to twice that many crops of bank clerks. Since the Tennis Cabinet he has been a term of he-man reproach. And he has sold a great many Arrow Collars. Altogether Cluett, Peabody estimate that they have spent on his Attic countenance and careful ties the sum of \$22,000,000. Since 1923 he has appeared, upon proper occasions, in soft collars. Recently he has not succeeded in outshining his rivals quite so conspicuously as in his glorious heyday, and Cluett, Peabody earnings have fallen off.

Mr. Leyendecker has been kinder to his creation than most commercial artists. The Arrow Collar Man has been in and out of matrimony (or if he hasn't he is a shameless, shirt-sleeved wanton) any number of times; he has seen



Cluett, Peabody & Co., Inc.

1909

Eternal Youth

receive; more millions they may die but cannot grow old.

innumerable operas (and been everlastingly bored by them all); he has waited for an unbelievable number of tennis matches to finish and taken an almost active part in any number of sports; he has sat around in the best clubs in America. His hair has been curly and straight, dark and light, but such vagaries are emphatically pertinent in so kaleidoscopically social a life as his. Always he has been handsome. And for years now he and the girl with the handsome shawl over her shoulders have been traveling in Cuba and Central America and abroad. It is not an altogether unattractive life.



1911



1927

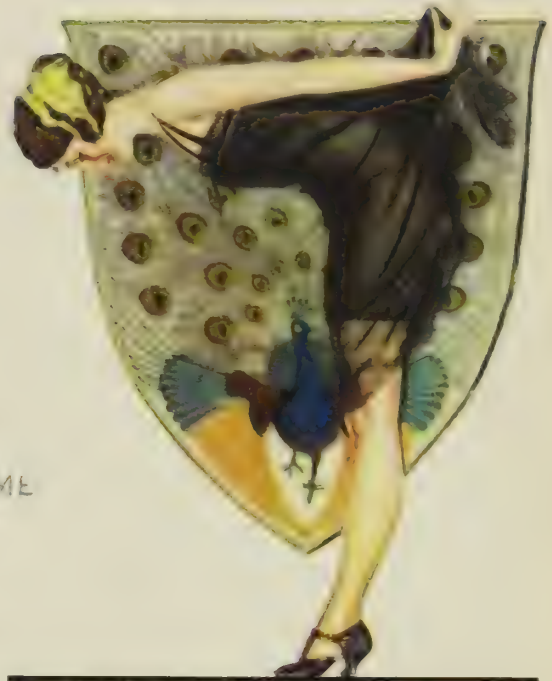


Courtesy National Biscuit Co.

SOMEWHERE in the United States there lives a gentleman of thirty-five who recalls his youth. For thirty years now he has been recalling it. For thirty years his boyhood, in boots and slicker with an oilskin hat, has dogged his heels. Perhaps Mr. Gordon Stille, for that is his name, loves that child. Perhaps, like Hamlet with the jester's skull, he addresses regretfully the face of what is gone. Perhaps he doesn't.

It was his uncle, Mr. Joseph J. Geisinger, an advertising man, who gave fame to the childish rosy face. The National Biscuit Company wanted a symbol for their "innerseal" idea, and Mr. Geisinger decided to have a picture of an old fisherman in a slicker eating nice dry biscuits out of a nice dry innerseal box. But the fisherman didn't seem to do. Mr. Geisinger, on sudden inspiration, seized his nephew, found some rubber boots, cut down a slicker to fit, and created the Uneeda Boy. An artist painted the photograph and when Mr. A. W. Green, then N. B. C. president, saw it, he went into ecstasies. The N. B. C. thereafter spent \$5,000,000 on the likeness.

Mr. Stille may have found much fine amusement in watching his youth disport itself on the trolley signs and billboards of the country. At first he merely stood in his oilskins and hugged his biscuits and gazed. Lately, however, he has altered his positions and has even spoken. And now, one hand in the hand of an elderly sou'westered fisherman (which his elder self has probably never met), he imitates the gestures of those who go down to the sea with pretzels. But what should most amuse Mr. Stille are the suits of many dozens of parents who claim that their offspring sat for the original photograph. Including that of one man who insisted that he himself had been the original, that he had been kidnapped, knocked on the head, forcibly photographed...



Courtesy Holeproof Hosiery Co.

THE Holeproof Girl is a great many women with the same legs. And the legs are Mrs. Phillips'. Coles Phillips began drawing about 1900 in a "factory" where a picture, started by someone who was good at heads, passed from hand to hand around the table. Mr. Phillips sat where the silk begins. And though he later mastered the anatomical intricacies of elbows and shoulder blades, he never lost his skill at calf and knee. Consequently the great Holeproof campaign of 1919 was a Coles Phillips campaign. By this time, however, Mr. Phillips had found and married the most beautiful knees and ankles of his expert acquaintance. They belonged to Teresa Hyde, who now writes for the *Saturday Evening Post*. And they are, or ought to be, the object of the prayers and gratitude of every mulberry grower, silkworm fancier, thread weaver, rayon salesman, and Cheney brother on earth. They have put more stenographers into silk stockings and more silk stockings into the undergraduate consciousness than any other agency on record, not excepting the stock market. They cost the Holeproof Hosiery Company's advertising department about \$350,000 a year. And they were worth to Coles Phillips, up to the time of his death in 1927, from \$500 to \$2,400 a picture which, after all, is small tribute to perfection. No matter who posed for the particular advertisement, Mrs. Phillips' legs were used. They were added to plumpish blondes and superimposed upon elaborate brunettes. They supported and adorned as many different complexions and physiognomies as the trade, in its tact, required. They were sheathed in as many colors as the trade, in its wisdom, decreed. And they were always elegant and sleek and worldly wise and knowing. If they are less familiar now than the bearded Smith Brothers or the prosperous countenance of King C. Gillette, it is solely because our Anglo-Saxon eyes distinguish people by their faces. It is otherwise in Teheran.

Clash of Steel

BURLINGAME
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From November to May, two mighty armies advanced and retreated across the map of steel. Here FORTUNE follows their movements, with a pointer, naming critically each maneuver, each general and his aides.

THE Versailles treaty was signed; upon Germany lay the heavy burden of reparations. In this country, the great steel mills found themselves with tremendous capacity and small demand. Out of the German laboratories came brilliant research in alloys, and many a U. S. steel company now sends royalty checks to the Ruhr. Slow and painful was the readjustment of the American industry. New combinations were projected, abandoned, reconsidered. Elbert H. Gary died, and the Morgan-Taylor-Farrell triumvirate followed him. All this was the background of unrest. Through it could be traced the chain of economic necessity. To it could be referred and related the great Bethlehem-Youngstown merger war.

But such historical method is too academic. At least a dozen events suggest themselves as more obvious and immediate starting points for this case history. There was the abolition, in 1924, of the schedule known as *Pittsburgh plus*, which largely increased the cost of shipping steel from the plants in the Mahoning River Valley of Ohio. There was the breakdown in 1921 of the "Billion-Dollar Merger," which would have linked seven steel companies (Republic, Inland, Youngstown Sheet & Tube, Brier Hill, Lackawanna, Cambria, Steel & Tube of America). There was the entrance of Cyrus Stephen Eaton into the industry, in 1925, with a \$20,000,000 purchase of the Trumbull Steel Co. There was Mr. Eaton's definite entrance into the Youngstown Sheet & Tube Co. late in 1927 when he bought 125,000 shares of that company's common stock. There was last year's final failure of four years of desultory negotiations for a merger of Youngstown with the Inland Steel Co. Any one of these dates could with reason be picked as the merger battle's genesis.

Actually, however, the war did not seem imminent until the late fall or early winter of 1929, and on September eleventh of last year there took place a colorful and much publicized event which serves as well as any to introduce four of the leading protagonists of the succeeding six months' battle.

On that day Mr. James A. Campbell, for thirty years the chief of the Youngstown Sheet & Tube Co., the most beloved citizen of the steel-saturated Mahoning River Valley, celebrated his seventy-fifth birthday.

Mainly, he celebrated it upon the links of Youngstown's hard, tricky golf course. On the day before his birthday, his house guests already included Mr. Eugene Gifford Grace, the president of the Bethlehem Steel Co. and Mr. Charles Michael Schwab, Bethlehem's genial, talkative chairman. The three men adjourned to the golf course, together with Frank Purnell, the forty-three-year-old chief lieutenant of Mr. Campbell. At the end of their eighteen holes, Campbell and Purnell were one up. So keen was the game (Grace and Purnell are excellent golfers, Campbell under 100, and Schwab indifferently good) that it was resumed on the following day, Mr. Campbell's birthday. The Bethlehem team triumphed: Campbell

and Purnell found themselves four down at the end of the round. As Scotch Mr. Campbell had fixed the stakes at twenty-five cents a hole, he produced a one-dollar bill and handed it to Mr. Schwab, who accepted it with much delight. Later he observed that he intended to frame it, as it was the first and last dollar he ever expected to extract from Jim Campbell.

This golfing birthday party is less important for what was discussed by the steelmen than for what was *not* discussed. The four executives did indeed talk of changes in the industry, did indeed ponder mergers, but the conversation revolved about the current plans of Youngstown Sheet & Tube. The Inland negotiations were still on the table; Eaton was welding Republic Steel and the press believed Sheet & Tube would be a part of the combination. All agreed that Sheet & Tube, with a large capacity for sheets and pipe, but with no production of rails or structural shapes, could wisely absorb a company which would fill out its list of products. But no one suggested that Bethlehem was such a company, or that Sheet & Tube should become the absorbed rather than the absorber. Throughout the early fall, Mr. Grace and Mr. Schwab were undeniably interested in Mr. Campbell's problem, but they did not think of themselves as the problem's solution.

On November fifth, Mr. Eaton was given what seemed to him strong assurance that this was the case. He had gone to New York, taking with him T. M. Girdler, who had just left Jones & Laughlin to become chairman of Republic. On that day while the stock market was reeling to new bottoms, he invited Mr. Grace to a luncheon in his rooms at the Biltmore. Two major points were discussed; the first concerned Bethlehem stock, of which about 800,000 shares were then in the hands of the banking group (headed by the Guaranty Trust Company) which had brought out the last of a \$139,000,000 issue just before the crash. Mr. Eaton suggested that his interests might take up a substantial portion of this unsold stock. Mr. Grace felt that this would be unwise, would be misinterpreted by the public. The second topic of discussion concerned the steel situation in general. Mr. Eaton later testified in court, quoting Mr. Grace as saying "that Bethlehem was rounded out in its present territory, that nothing would tempt it to come into the Middle West, that if he did it would lead to difficulties with some of his friends, and that Bethlehem's policy was definitely to stay where they were in the East, except for the property that they were then negotiating for on the Pacific coast that would put them on the two coasts, and that they had no intention of muddying the water in the Middle West." Whether Mr. Eaton's memory of this conversation is accurate or not, it is probably true that he left for Cleveland with the impression that his plans need expect no interference from Bethlehem.

At this point Mr. Eaton rested, feeling himself in a secure position. He had indeed become a great steel power. He was

about to complete the Republic deal, creating out of the old Republic Iron & Steel Co., Inter-State Central Alloy Bourne-Fuller, and Donner a new \$350,000,000 company. He owned or controlled personally about 75,000 shares of Sheet & Tube; the Cliffs Corporation, in which he held a half-interest (the Mathers held the other half), owned 125,000 shares; another 60,000 shares were held by the group of companies close to him—three investment trusts: Continental Shares, Commonwealth Securities, International Shares, and, of course, the banking house of Otis & Co. In addition, he still held something like 200,000 shares of the Inland Steel Co. All in all, it probably represented the largest stake any individual had in the industry (Mr. George F. Baker's holding of U. S. Steel is currently valued at \$16,000,000) and was an extraordinary position for the pleasant, mild-mannered boy from Pugwash, Nova Scotia, to occupy. Cyrus Eaton is forty-six. He came to Cleveland in 1907, was given a job by the elder Rockefeller, played with utilities for a time, and in 1914 went into banking. The question was not raised, in 1916, whether Cyrus Eaton was becoming a partner in Otis & Co. or whether Otis & Co. was acquiring a partnership in Mr. Eaton. Since that time the two have been indistinguishable. They are concerned with many industries other than steel, most notably and recently with rubber. To this industry, Mr. Eaton turned his attention in the early winter, allowing the steel situation to simmer for a time. In fact, until the seventh of March.

Into the precise phenomena which changed the plans of both Mr. Campbell and Mr. Grace, it is difficult and profitless to inquire. By the early part of February, Mr. Grace found himself sitting in a large Manhattan office talking with Mr. Campbell, Mr. Henry G. Dalton, first vice president and director of Sheet & Tube, and a third man to whom the office belonged. This was George May, the senior partner of Price, Waterhouse & Co., leading firm of certified public accountants. Mr. May was saying that he thought a fair basis of exchange would be one and one-fifth shares of Bethlehem stock for one share of Sheet & Tube. "Now with reference to your outlook for business in the future, I can't say about that. You gentlemen will have to decide about it, and if there is either side that ought to have anything more than the other, then you will have to decide that among you."

This was the first suggestion of a definite program for the merger, but it obviously followed considerable work by Price, Waterhouse and this in turn must have followed some little discussion between the Bethlehem and Youngstown executives. Mr. Campbell testified that the decision to submit the proposition to Price, Waterhouse had been reached about January fifteenth, at his (Mr. Campbell's) third meeting with Mr. Grace. Going back of this, Mr. Campbell recalled having met Mr. Grace alone, near the end of December, at the Hotel Plaza in New York. "Grace asked me if I was committed to anyone else. I told him I had been talking about a merger to Inland, but I had advised L. E. Block (chairman of Inland) that we could not go through with it."

Mr. Campbell's testimony is here very illuminating. Mr. Eaton had quoted him as saying: "I haven't had very much to do with these negotiations. They were initiated by Mr. Dalton and have been carried on mainly by Mr. Dalton and Mr. Grace." But here he specifically declares: "This first meeting was at my instance. I did not consult anyone about it." And again, in a statement to the press, he reiterates: "Bethlehem has treated us fairly. They did not come to us—we went to them. I made the deal, I made the price, and

I am for it, 100 per cent." This frank and blunt statement is at abrupt variance with the obvious belief on Mr. Eaton's part that the impelling force in the merger was not Mr. Campbell but Mr. Dalton. It should be noted that Mr. Dalton, in addition to being a director of Sheet & Tube, is also a director of Bethlehem, and is one of the chiefs of the Cleveland firm of Pickands, Mather & Co. This last company exists by mining ore for steel companies and then transporting it over the Lakes by boat and to the steel mills by rail. In 1929, Republic Iron & Steel paid Pickands, Mather \$1,498,000 for such middlemen services and Sheet & Tube paid \$20,955,000; the Pickands, Mather contracts with Bethlehem have never been made public. Mr. Eaton inferentially suggested that they were very large, declared he would like to know just how large, but admitted he had never asked the firm itself about them. It is possible to conjure up a picture of Mr. Grace using these contracts as a club over Mr. Dalton's head, but to put faith in the picture or to visualize Mr. Dalton as the compelling agent of the deal is to think Mr. Campbell a liar.

Mr. Campbell's own account of the mental processes which led him to Mr. Grace is not much more satisfactory. "There was pressure," he complains, "at all times—to merge with somebody. Pressure from stockholders and from Mr. McCleary, the president of the Republic Iron & Steel Company. Pressure was brought to bear by Mr. Eaton with reference to Inland and the other people with reference to the Republic." If this seems a curious reason for beginning negotiations with a company for which he had no very high regard (as he later admitted), it must be remembered that Mr. Campbell was an old man, that he wanted to unload the heavy responsibilities he had carried for so long, that Sheet & Tube was to him an intensely personal and private concern. He had run it for thirty years and had made it a great company. He had made Youngstown one of the most self-conscious communities in the country. In all these thirty years, while he became a vastly wealthy man, no other interest, no summer home or stable or yacht or old master, had ever challenged his deep absorption in his company and his city. It was impossible for him to abandon Sheet & Tube while merger talk was afloat, while he was being told that his company should expand, diversify, become national. Thus we see him, tired, tormented by personal problems, entering Mr. Grace's apartment at the Plaza to do one last turn for his company and win through to his own peace of mind.

Just how good a turn he did do for his company is of course one of the major points at issue in the controversy. Purnell (who, since the golf game, had become Sheet & Tube president) did most of the figuring with Grace and with Price, Waterhouse, and rejected the one and one-fifth for one basis. At a final meeting, also at the Plaza, Mr. Campbell, Mr. Dalton, and Mr. Purnell agreed to submit to the stockholders a merger plan on the basis of one and one-third for one. This was on Saturday, March first, the meeting lasting from noon until midnight. Everyone left with the feeling that the matter was settled, and Mr. Campbell seemed to be coming near to the end of his puzzlement.

March 3-6.—On Monday Mr. Dalton reached Cleveland. On Tuesday he telephoned Mr. Eaton, but was told by S. Livingston Mather (nephew of William G. Mather, son of Samuel Mather) that Mr. Eaton would not return from Florida until Friday. Old Samuel Mather, the chief of Pickands, Mather (and a director of U. S. Steel), perhaps the richest man in Ohio, of whom Newton D. Baker later said, "A million voices hail him Cleveland's first citizen," fell in heartily with the plan. His brother, William G. Mather,

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Culver Service

Cotton: The World in Revolt

For a century the peerless aristocracy of one American was recognized. He was seven-eighths of an inch or longer. He was King Cotton. Now, throughout the world, his length is rivaled, his dominion divided.

TWO men stand by a bale of cotton. One deftly slashes two holes in it, extracts a handful of cotton from each. With a swift move of his practiced fingers he gauges the quality of both samples and then bids on the bale, always basing his price upon the poorer handful.

In textbooks this scene is often pictured, perhaps with some caption such as: "The Cotton Farmer Sells His Crop." But the characters are apt to be wearing the clothes of last century, and the text itself has not needed revision although other parts of the book have been changed from edition to edition.

Consider another scene. On a great platform stands the entire American cotton crop, 14,000,000 shaggy bales. Neatly piled as these bales are, a whole countryside has been razed to provide for them. None other than the Paul Bunyan of Northwest woods lore, he who with a careless swing of his hatchet created the Grand Canyon, he who built a bunkhouse so high that the top was hinged to allow the moon to pass, could have erected this platform and piled the cotton upon it. Nearby stand the growers, white landowners, negroes, tenants. In some cases they represent nearly all the rural manpower of their states, plus much womanpower. In all cases they are poor, continuously poor as only farmers can be. The buyer slashes for his two samples. Weary, needing money, the farmers agree to his price without complaint. A check, perhaps for \$1,500,000,000, is given them.

No indifference would mark this transaction. Reporters, with direct lines to their papers, would give running accounts of it. Photographers

would mingle with the crowds. The nervous stock markets of the world would fluctuate upon the size of the farmers' check. And, if each year the two samples were of poorer quality, if the price had a tendency to slump steadily, the American business world would await this annual deal with excited alarm. For while knowledge that one farmer, many farmers, received only \$1,000 for what they expected would yield \$1,500 is not in itself frightening, the actual sight of the united farmers of the cotton belt returning \$500,000,000 poorer would be appalling.

The reasons for the cotton farmer's steadily more grievous plight are two. First there is the deterioration of the American crop in quality. Alone, this would not affect the Divine Right of Near-Monopoly, which has enabled American cotton to be called King Cotton. But increased and carefully calculated competition from foreign nations has destroyed the monopolistic position and with it the Kingship.

Just as it is impossible to overestimate King Cotton's part in the present scheme of things, it is impossible to overestimate his work in the creation of the structure. Every history of the industrial age commences with reference to Arkwright's loom, Whitney's gin (over which there was patent litigation for nearly a generation), the development of England's mills. Yet ruthlessness has marked King Cotton's conquest; his rule has been harsh. Cotton brought slavery to America; it created the laboring class. Rebellion, poverty, war have marked its march. Perhaps these may be entered in the world's balance

sheet as "Deferred Charges Incidental to Development," but they form an item that has taken years to write-down and one that in centuries less composed would perhaps have made the plant an outcast, an accursed thing.

Now, with the development over, with King Cotton's domain threatened, a grim heritage remains. For King Cotton has not helped the thralls that blindly serve him. The farmer, considered as the Collective Farmer, is a grossly maladjusted person in an industrial era. Whereas production in industry is controlled, farming remains uncontrolled and apparently uncontrollable. Of all the essential pursuits, it alone remains a gamble. Thus is the most hazardous of undertakings left in the hands of the person least able to stand the losses, least able to use the rare but tremendous winnings that Fortune's wheel may bring him.

To the American cotton farmer some things are understandable. When a late frost, an early frost, too warm a spell or too cold a spell destroy his crop, he submits to the mercy of cosmic forces. When weevils swarm over the farmer's bolls, when lousy things infest his plants, he is philosophical in the face of a universal evil.

But one thing that angers the farmer beyond all reason, that torments him into strange outcries of fury is the fluctuation of prices. That prices are low when he sells, high after he has sold, low when his crop is bountiful, high when it is poor, he attributes to malevolent forces plotting against him, to a giant conspiracy of moneyed forces. Defiantly he and the politicians who represent him and the committees the politicians appoint all cry "manipulation." But while manipulation plays only a small part in these fluctuations, it is here that the first step can be made to aid the farmer. The government has attempted to do it with the creation of the Federal Farm Board, which so far instead of stabilizing prices may have been a partial cause for such swings as those which carried July cotton from 20 cents in September to 14.22 in March back to 16.50 on the first of May. How this will turn out, no man should prophesy. Yet some have, and Will Clayton of Anderson-Clayton, perhaps the biggest concern in the cotton market, has been vigorous in his protests against governmental interference. But even without the Farm Board, steps have been made to improve



Culver Service

the awkward and violent interreaction of supply and demand that commences when the first farmer stands by to see his bales sampled, ends only after the last bale is warehoused. Giant coöperative agencies bargaining for their members, standardization of grades and quicker communication of prices all work to help the farmer in this trouble.

Yet however baffled the farmer is by these conditions, he is absolutely aghast to learn that American mills buy foreign cotton, foreign mills buy less American cotton every year. Here something seems wrong with the government, some oversight on the part of the great paternal government that sends him circulars on how to discomfort the weevil, how to manure his fields. Surely, he reasons, the government should put a rapid end to so unpatriotic a state of affairs.

There are signs of a new and virile leadership in the South which will accept the challenge of world competition and endeavor to restore to King Cotton some of his lost domain, or at any rate save the half of the cotton world which still remains his. Outstanding among such leaders is Oliver Max Gardner, Governor of North Carolina, a powerful six-foot personality. An able politician and a lawyer, he is also respected for having been a great footballer and having made a million or two in the North Carolina cotton textile business. An important step he recently made to help this industry is briefly described under *Faces and Facts* on page 142. While his work in farming may not have produced great monetary results, it has been just as convincing. In 1910 he bought a 150-acre farm on credit and has been growing things ever since.

Cleveland County, North Carolina, which boasts of the Governor as its "favorite son," has prospered phenomenally under his influence, and its cotton farmers are disappointed when their crop fails to fetch at least \$7.50 a bale above average. Last year this county laid claim to a world's record for cotton-per-acre—64,000 bales from 79,000 acres. If every Southern cotton acre could yield cotton in this quantity and quality, the rest of the world might quit the race.

In the succeeding article, the Governor sets forth the serious threat of world competition and proposes to meet the challenge. For the benefit of non-cotton folk, *FORTUNE* follows on page 76 with elementary facts concerning this subject.

Cotton: Long Live the King BURLINGAME PUBLIC LIB.

A powerful Southerner, O. Max Gardner, writes with little sympathy for proposals of abdication. Threat of ruin is manifest. But the South can regain its crown by raising more, especially more aristocratic cotton.

(The article which immediately follows is contributed to FORTUNE by the Hon. O. Max Gardner, Governor of North Carolina.)

THERE is perhaps no area of comparable size in the world whose very civilization has been conditioned by a single plant as the civilization of the South has been conditioned by cotton. I am reminded of Henry W. Grady's classical characterization of this situation:

What a royal plant it is. The world waits in attendance upon its growth; the shower that falls whispering on its leaves is heard round the earth; the sun that shines on it is tempered by the prayers of all the people; the dews that descend from the stars are noted . . . Its fibre is current in every bank.

The present-day South, in the struggle for an adequate return from labor and investment in cotton growing, has a bigger problem and a bigger issue than that of merely adjusting production to demand. It has the problem of recapturing lost position in world markets. And there is an even more insistent, though less exalting, need of at least retaining our present status.

Cotton is the one great American crop with demand centering primarily in foreign markets. Twenty years ago the world mills outside of the United States consumed approximately 11,000,000 bales of cotton, and 70 per cent of it came from this country. During recent years foreign mills have been consuming approximately 18,750,00 bales, and they have averaged getting only 47 per cent of it from this country. We have not only failed to share in the production for this increased foreign consumption, but

we have actually lost a part of our old market.

World students of the cotton situation are of the opinion that the trend of increased production abroad is likely to continue unless it can be thwarted by an improved quality, which must be accompanied also by a lowered cost of production in this country. A little further along in this article I shall take up a discussion of what our competitors are doing and what they are likely to do, but I first wish to call attention to some factors which have contributed to our decline from the peak of cotton production supremacy. They are factors, too, which have at the same time been both meat and drink to our competitors abroad. We too often confuse the real cotton destiny issue with the cotton destiny symptoms of the day. As I write this article we are in the throes of one of the periodic cotton acreage reduction campaigns. Before me is a poster which argues eloquently for a reduced acreage this year. Here are the pertinent facts of this poster:

From the 1923 crop of ten million bales, two bales brought \$300.

From the 1924 crop of fourteen million bales, two and one-half bales brought \$300.

From the 1926 crop of eighteen million bales, four and two-thirds bales brought \$300.

In 1930 ? bales will bring \$300?

The clear inference of this poster is that the solution of the cotton problem is a very simple one: that we need merely to produce less in order to get more money. Unfortunately such a remedy, while it undoubtedly would prove a

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Weevil



Culver Service

FEW thanks are given to pests and still fewer monuments. But in Enterprise, Alabama, once a cotton-growing town, stands a statue (shown above) to the boll weevil. For the weevil, oddly enough, taught the planters of Enterprise a profitable and economic lesson. So often did he destroy their cotton that, in desperation, they finally planted peanuts, which no weevil attacks. And by so doing they made money. Not always is such a procedure wise, but in this case it was. The citizens of Enterprise do not forget and are not ungrateful and today their monument prominently proclaims the legend they inscribed thereon:

IN PROFOUND APPRECIATION
OF THE BOLL WEEVIL
AND WHAT IT HAS DONE
AS THE HERALD OF PROSPERITY
THIS MONUMENT WAS ERECTED
BY THE CITIZENS OF
ENTERPRISE, COFFEE COUNTY, ALABAMA



Underwood & Underwood

WEEVILS AT HOME

IF YOU starve a boll weevil, it may eat an apple or a banana. If you spray its food with calcium arsenate, it will probably die. If you prod one, it will curl up its legs and play possum. If you leave two of them together and they are of opposite sexes, they are able to beget a family of 12,500,000 in eight months. If you are Carl Sandburg and hear of them, you will think of a poem beginning, "Oh, de boll weevil am a little black bug. Come from Mexico, they say . . ." And if you are Carl Sandburg, what you heard about the Mexican origin is correct.

The weevil left Mexico, in fact, in 1892, and went to Brownsville, Texas. Whether it flew, which is possible, or whether it rode on imported seed cotton, which is equally possible, or whether it walked, which is unlikely, nobody knows. Or cares, any more. For there is not a state today within the cotton belt which does not harbor it. Like the Mohammedan, the weevil turned to the east, and his journey from Texas to the Atlantic coast seemed to take only the time of a couple of genuflections. When he got to the Carolinas, he hopped to the islands off the coast and destroyed the finest cotton ever grown, the Sea Island, of which no more is produced anywhere in the United States today. He has never taken, though many wish he would, a final obliterative hop into the Atlantic.

The weevil is a bug, a quarter of an inch long, and half of it is snout. Like many a human being, its period of greatest activity is from nine o'clock in the morning to five in the afternoon. But unlike most humans, its activity seems mainly concerned with reproduction and with its well-known predilection for the destruction of cotton. The female's great joy is to puncture with her snout an unopened boll of cotton. Into the cozy niche she deposits her eggs, and in about ten days a family is hatched and a cotton boll ruined. The youngsters need no training; modern, they know. As soon as they physically can, they saunter forth to do exactly as their parents did before them. Thus in brief runs the tragedy of cotton. The destruction is the more complete because the female is choosy. She will not deposit her eggs where some other female has already done so. Only when the season is well spent and all the bolls of a plantation are inhabited will she bow to the necessity of overpopulation and allow her progeny to share its home with that of another. In winter, the weevils rest in cracks and piles of rubbish, by the edges of forests and in Spanish moss. The average life of a weevil is two months, though one, mentioned but unnamed by all authorities, is known to have lived eleven months.

Of course, it is not to be supposed that the weevil is allowed to live and multiply in peace. The most gallant but generally ineffective gesture against it is made by the cotton plant itself, which sometimes heals the wound that the female has made and in so doing crushes to death the larvæ deposited therein. Most dangerous to the life of young weevils is the sun. Its rays in a few minutes can destroy larvæ, exposed and fallen to earth in an infested square of cotton. Forty-five insects and twelve species of ants eat them, and birds are occasionally interested. Man's device of destruction is calcium arsenate. His last resort is early cotton, which will blossom before the weevil can plunge its eager nose into the boll. But early cotton is rarely the best. Cotton itself contrives to defeat the planter's desire to grow good cotton. For cotton's pollen is easily distributed by wind or insect. Even if the weevil has spared a farmer, not all of his fields are of equal excellence. And last year's nearly perfect field may be contaminated this year by the degenerate pollen of an inferior field next to it. Or by a neighbor's miles from it.

There is, of course, a school of defeatism whose members argue that in every weevil resides some good, that without him the farmers' lives would be dull, their crops too bountiful. Yet, even were the weevil exterminated, Nature and the Farmer would sign no treaty of peace. Between planting and harvest a host of maladies and pests besiege Cotton. Of the former, planters dread most cotton wilt (or black heart or frenching), root knot, anthracnose, rust, boll rot, core shin (or seedling rot). Of North American pests, second deadliest is the pink boll worm (against which the pot-bellied mite louse, or *pedic uloides ventricosus*, and the United States wage endless war). Others are the cotton caterpillar, the grass worm, boll worm, wire worm, and the red spider. In Egypt there is the spiny boll worm; in the West Indies the stainer (or sucking bug), the bronze beetle, the red maggot; while Africa, appropriately, must fight the dusky bug. But deadliest is the exclusively American boll weevil.

palliative to a distressing symptom, would serve also to aggravate the fundamental cause.

Our cotton troubles tie on to the erratic yield curve and greatly increased cost of production under boll weevil conditions. During the past fifteen years the national cotton yield has only twice exceeded 170 pounds of lint to the acre. Twice also it has dipped below 130 pounds. On the other hand, during the twenty-five years from 1890 to 1915, only three times did the cotton yield fall below 170 pounds to the acre, and nine times it exceeded 190 pounds. Not only has the coming of the weevil brought about a much lower acre yield, but this yield has been secured at a greater cost per acre and a much greater cost per pound of lint. Furthermore, the weevil has also caused a deterioration in length of staple. Early in the weevil fight it was found that a type of very short staple cotton which rushed through to quick maturity would suffer less damage than a more slow-growing better staple sort. Although the early-maturing trait can now be had in better staple cotton varieties, use of the old sorts with extremely low-grade fiber still persists and has now become a serious detrimental factor in our international cotton trade. Government survey last season disclosed 3,000,000 bales, or more than one-fifth of our production, to be fiber so short as to be non-tenderable in filling futures contracts.

The beginning of expansion in cotton production abroad may be attributed to the high prices prevailing toward the close of the War. Added impetus was given the foreign production movement by the very short American crops during the three years 1921-1924. Our production during this three-year period averaged less than 10,000,000 bales per year. The resultant high world price on the one hand, and on the other the fear of foreign spinners that a raw material supply might be jeopardized started a trend of foreign competition which has continued to expand.

Competition in every direction

Since the 1921-22 crop, cotton production outside of the United States has increased ap-

proximately 4,000,000 bales. The expansion has been mainly in India and Russia, and to a lesser degree in Africa and South America. Along with this increase in production there has come a marked betterment in quality of the staple. It is estimated that 40 per cent of the total foreign growth of cotton, or approximately 4,400,000 bales, now falls in the staple length group ranging from $\frac{7}{8}$ to $1\frac{3}{32}$ inches, in direct competition with the bulk of our export cotton.

Since 1921-22 the Russian crop has climbed up from 43,100 bales to 1,325,000 for 1929-30. It is reported that only government certified seed may be used by the Russian farmer, and that in this way the quality of the Russian crop is kept to a uniformly high standard.

One thing holding back still more rapid development of cotton growing in Russia is the lack of interregional transportation and trade. This economic isolation of Russia's potential cotton areas makes it necessary for the cotton farmer to produce his own food and supplies and prevents greater specialization in cotton culture. It is therefore possible that Russia's projected transportation facilities will be an important factor in hastening the expansion of her cotton program.

In India, where there has been marked increase in cotton production, there has also been marked improvement in staple length. Approximately 40 per cent of the present crop falls into the class of seven-eighths inch and better staple. During the past decade India has made an 85 per cent increase in this type of cotton and only a 30 per cent increase in the lower grades. The India crop is now centering around a production of only slightly less than 5,000,000 bales of 478 pounds net, as compared with a normal pre-War production of between 3,000,000 and 4,000,000 bales. Considering the fact that the India crop occupies an area of between 25,000,000 and 30,000,000 acres and now yields an average of less than a hundred pounds of lint to the acre, it is apparent that a small increase in acre yield on this huge acreage would mean vastly more cotton. And the British pressure which has already resulted in a bettering of quality may become a factor of no small importance in bettering yield.

Cotton is gaining a hold in many places in the great continent of Africa. The old Egyptian center of production has shown some expansion, having increased production from less than 1,500,000 bales pre-War to 1,640,000 bales for the past season. The Anglo-Egyptian Sudan has increased from 14,000 pre-War to 164,000 bales last year. In more than a dozen other centers of production in Africa the cotton crop, though still small, shows an expansion trend which may be considered significant. In Uganda the crop has increased from a pre-War yield of 20,000 bales to more than 165,000 last year. Tanganyika has increased its output nearly 200 per cent, though, expressed in bales, the 23,000 output is not yet alarmingly large. The Union of South Africa, which before the War produced less than one hundred bales, has worked up to a 10,000 bale crop. Nigeria is credited last year with 28,000 bales. The same country produced less than 10,000 bales in pre-War days.

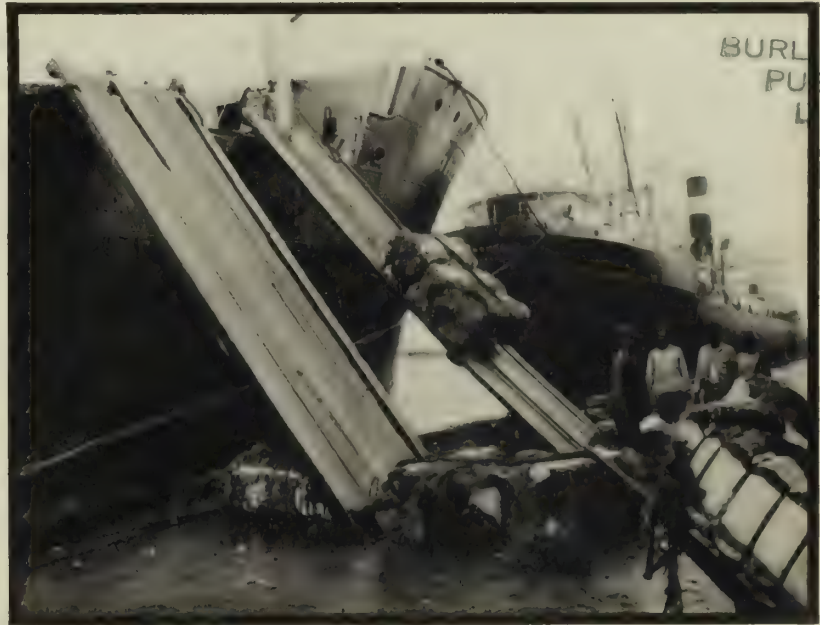
In South America numerous countries show a cotton expansion trend, and the annual production has climbed up from a little more than a 500,000 bale crop for pre-War days to just a little less than 1,000,000 bales last year. In various places in Oceania cotton growing, unknown before the War, has become well established.

It is clearly evident from even the most cursory glance at world cotton statistics that this country is in no position to act as if it had a monopoly on cotton production. Nor are the Indian and Russian farmers alone in their efforts to produce a superior fiber. For the past decade cotton specialists from every would-be producing country of the world have swarmed over the South. They have not only studied our best production methods, but they have secured large shipments of our very highest quality seed and have organized its introduction and use. The great authority, John A. Todd, of the Liverpool School of Commerce, very aptly summarized the situation:

Not only are the world's supplies other than American increasing steadily if slowly in quantity, but also the great bulk of the new supplies is of a quality at least as good as all but the



By Ewing Galloway, N. Y.
SOME OF THE 320,000 BALES STORED IN
NEW ORLEANS' PUBLIC WAREHOUSE



© Publishers Photo Service
AN ARISTOCRAT STARTS ABROAD. LOADING COTTON
AT THE PORT OF CORPUS CHRISTI, TEXAS



Courtesy Delphic Studios

best American, and every one of the countries is doing what it can to produce the best cotton it is capable of growing or to improve the varieties formerly grown. Contrast this with the position in America where the history of the last twenty years has been one of almost steady deterioration in the average quality of the crop.

Our cotton situation with reference to world markets offers some interesting contrasts with wheat, of which commodity we are normally the second largest exporter in the world. Canada ranks first, shipping out from 300,000,000 to 400,000,000 bushels of wheat annually. Our exports for the past five years have varied from slightly over 100,000,000 to slightly over 200,000,000 bushels, and for four years of the past five have exceeded the exports of Argentina, the third largest exporting nation. We are likely to continue heavy wheat production because the bulk of our crop is produced with power-operated machinery of such an efficient type that hand labor in the normal sense of the word has

almost been dispensed with. The great bulk of the crop in commercial wheat-producing areas is also planted with the improved varieties which have been developed by scientists on the basis of yield, quality, and maximum resistance to disease. The head of the cereal department of the University of Nebraska recently remarked that fully 90 per cent of the wheat planted in that state was put out to varieties developed at that institution or at similar institutions in neighboring states. The story is largely the same in the other great wheat states of the West.

It is true, of course, that it is simpler to maintain a wheat variety than to maintain a cotton variety. This is true because the flower of the wheat plant is fertilized with its own pollen. The cotton flower, on the other hand, is fertilized by any pollen the bees may happen to bring to it or that may be wafted on a fortuitous breeze, and under ordinary farm conditions, cotton more than two years removed from the special plant breeder's care has shown marked deterioration.

Cotton growers need to take their cue from the wheat men in the important matters of rigorous care in the use of seed for planting and striving for greater efficiency of labor in the whole production process. Labor cost today not only represents over 70 per cent of the cost of producing cotton, but it is largely hand labor which utilizes but little mechanical power.

World demand for cotton seems in nowise threatened by the increase in the use of rayon and other fabric material, nor can the present depressed state of the raw cotton market be attributed in any measurable degree to the rise in the use of these new fabrics.

Whatever may be the decline in per capita consumption of cotton and other textiles as coming from the radical changes in fashion and habits of dress during the past two decades, it is apparent that the increased use of cotton in industry and for other purposes has more than offset these changes. Recent studies by the Cotton-Textile Institute show that per capita con-

sumption of cotton cloth is nearly 20 per cent greater than it was thirty years ago. While population has increased at an average rate of approximately 2 per cent a year during this period, the analysis indicates that consumption has increased at an average rate of more than 3 per cent annually.

New emphasis on style has enhanced the fashion importance of cotton. Sales of cotton fabrics for wearing apparel have shown a substantial increase, particularly during the last few years. More cotton cloth was sold as piece goods and in ready-made dresses in 1928 than in 1927. A substantial increase was also noted in 1929.

A very large proportion of the entire output of cotton cloth is now used for so-called industrial purposes. By and large, this is probably the biggest group of uses which the cotton industry has at the present time. It includes the enormous amounts required annually in the automobile industry, in the electrical industry, for bags and bagging, agricultural uses, etc.

Rayon is the young and rapidly growing new member of the textile family. It is quite apparent, however, that far from having an adverse effect upon cotton, rayon is a staunch ally much used in combination with cotton and other textiles. Many cotton mills are large users of rayon, and by combining these two it has been possible to develop attractive new fabrics with style and

design that are particularly effective used either for decorative purposes or for wearing apparel.

Challenge accepted

The danger to the American cotton grower, therefore, is not one of restricted but rather one of expanded world demand. If foreign countries find themselves unable to get American cotton of a grade and at a price and in volume to fill their needs, they will bend every effort to develop an adequate supply elsewhere. Cotton has ceased to be a strictly American commodity.

While the cotton farmer of this country does occasionally need the support of some strong price stabilization force to prevent the devastating effect of such ruinous times as 1926, when cotton dropped below ten cents a pound only to snap back twenty cents the following year, he needs, even more insistently and needs all the time, stronger state and national government support in developing such technical methods of production as will result in a quality product raised at a profit and still at a price which will discourage the growing foreign competition.

The development of coöperative marketing is apparently leading to the opportunity of every grower selling his crop on a grade and staple basis in lieu of the old absurd practice of the country buyer paying merely the average

community price for all cotton and thus penalizing the man with the superior staple crop. But, in addition to this better marketing plan now in sight, the state and the nation must join hands with and support the reputable plant breeder in an effort to make available cottonseed which will produce quality cotton.

There is a new school of agricultural thought in the South willing to accept the challenge of the world in this matter of cotton supremacy. This school holds that cotton production needs a new sort of exhaustive research and then needs to coördinate activities of all existing agencies in bringing this research to bear on the cotton farm. There are those who hold that the old South could double or perhaps treble its acre yield through developing new style legumes adapted to humus-deficient lands. It is perhaps true that the South as a whole has put most of the stress of its scientific effort on the largely fatuous task of developing alternative industries rather than on effort to safeguard the already dominant crop, cotton. In view of the present world situation, it should be easily apparent that if we dally with the problem by merely planning to produce what the world will take from us at a fair profit, we are likely to find this amount decreasing decade by decade, with an overproduction problem following us all the way down the line to ruin.



Courtesy Delphic Studios

A LAZY RIVER, AND ON PAGE 74, A LAZY PICKER, REMAIN NOTICEABLY DETACHED FROM THE FRENZY OF WAITING MARKETS. BOTH BY THOMAS BENTON

The Plant Man Wears

Its Seed & Flower & Lint . . . And How a World Tortoise Gains on a U. S. Hare.

I

The chief use of cotton is for clothing. Of the world's 1,650,000,000 people, only one-third are in that unhappy state, "completely clothed," leaving a tremendous potential market. It was an understanding of this that prompted the witty Mr. Wu Ting Fang, visiting the cotton fields in 1901, to remark that if each of his countrymen would add an inch to his shirt, China could consume an additional 2,000,000 bales.

II

And 2,000,000 bales would be no mean matter, since the world's production last year came to less than 26,000,000 bales. In thousands of bales, the leading producers last year were:

United States	14,477
India	4,915
China	1,750
Egypt	1,628
Russia	1,208

III

In fact, a million bales is easier said than done. Although bales differ, your usual United States bale is a trifle less than 500 pounds of cotton, which is the product of one crack acre or of three and one-third ordinary acres. At the dock ready to be launched into a thousand ships, 1,000,000 bales (at seventeen cents per pound) are worth roughly \$80,000,000. Multiply that by fourteen and you have a rough valuation of a U. S. crop.

IV

But even as the drops that make the mighty ocean, so are the little lints that make King Cotton's crown. If each lint is seven-eighths of an inch long, the Crown is satisfied; if longer, the Crown exults in great prosperity; if shorter, the Crown totters on the head of an insolvent monarch. To find the lint, seek the mother.

V

The cotton plant is a small, shrublike thing, usually three to four feet high. A wild perennial cotton, if left alone, would reach a treelike state. Only for the sake of commercial convenience is it killed each year and replanted. In South America, giant tree cotton of six to ten feet is found.

VI

Like all plants, cotton has a flower. And theoretically it could flower all season. But unlike many plants, it is an unmistakable, beautiful flower. In most American cotton, the flower is white or a pale yellow when it opens, but by sunset of the first day has changed to an attractive pink hue. On the second, and usually the last day of its life, the flower is a deep red. Some

foreign cotton flowers open as bright yellow or brilliant red. It is after the flower has died that the boll is formed, containing seeds. Each seed has about 10,000 hairs attached to it in order that it may be blown far in the wind.

VII

These hairs are the lint, which is what is usually meant by cotton. In the cotton gin, these hairs are removed from the seed. Shorter hairs or linters are taken off in a second process, and the seeds are then used either for replanting or are crushed, their hulks turned into cottonseed meal, their insides to cottonseed oil.

VIII

How fine a fabric perfect cotton forms is well described by what a traveler in India wrote in his diary in 1600: "If a person puts such garments on his body, it is visible just as if he were naked. The merchants are not allowed to buy this cloth. All of it must be delivered into the hands of the King, who has garments made of

it for the inmates of his harem and the wives of noblemen . . ."

IX

In the United States nearly all cotton is planted by machine, the cottonseed being dropped into holes drilled in little ridges that have been thrown up about three or four feet apart. Usually from fifteen to thirty pounds of seed are used in planting an acre. In Egypt, where the soil is hard and the top often baked, generations of farming have taught the planters that it is wise to include a bean seed in each hole, for, tough and vigorous, the bean stalk has no trouble in emerging. Ten days after planting, the farmer can usually inspect the first green cotton sprouts, and then commences his long fear lest frost come and destroy his potential crop.

X

Presumably the largest single unit cotton plantation is that of the Delta and Pine Land Co. of Scott, Mississippi, where at headquarters they have 15,000 acres of cotton. Nearby the company has two other units of about 8,000 more acres. At 150 pounds an acre, that makes a theoretical average of 3,450,000 pounds. At ten cents per pound, that makes only \$345,000. Few cotton men aspire to such enterprises. Size, in agriculture, has built few fortunes.

XI

The most costly cotton growing operation is picking, usually commenced from August first in the South to early September in the North, and finished sometime in December. The work is done by hand, each boll's contents plucked and tossed into a sack. Most of the work is done by negroes and children in the South, Mexicans and Indians elsewhere. Women pickers refuse to work Saturdays and Sundays.

Great will be the revolution in cotton methods and prices when a picking machine is perfected. Many have been invented; none has been really acknowledged as satisfactory. The International Harvester Co. has several times been said to be on the verge of success but still labors on the problem. And the American Cotton Picker Machine Co., headed by wily William Crapo Durant is now selling a machine.

XII

In almost all sections of the cotton belt, cotton is sold after it has been ginned. Most of the ginneries are public, charging by the hundred pounds of seed cotton, with additional items for the bagging and ties used in making up bales. As the lint comes from the gin, seed and dirt extracted, it is pressed into bales covered on two sides and on the ends with bagging. It is then



© Publishers Photo Service
THE KING IN HIS PRIME

tied with six steel bands. The bale is usually fifty-four inches long by twenty-seven inches wide and forty-five inches deep, is pressed at the relatively low density of twelve or fifteen pounds per cubic foot, which gives it a weight of around 500 pounds. Then, at interior markets and concentration points, it is compressed at the high density of from twenty-two to thirty-five pounds per cubic foot, reducing the bale's size by half.

Every prospective buyer hacks at the baling, takes out a handful of cotton. By the time the bale reaches foreign markets it is ragged and dirty, exciting a feeling of impotent disgust at American methods.

XIII

The journey of cotton from the gin to the mills is marked by many changes of owners. The grower usually sells right after it is ginned to a local buyer who may either buy from his own firm, a representative from a larger one, or a traveling buyer. From this primary market it travels to the large interior markets such as Charlotte, North Carolina, Spartanburg, South Carolina, Macon, Georgia, Montgomery, Alabama, Greenwood, Mississippi, Pine Bluff, Arkansas, Shreveport, Louisiana, Fort Worth, Texas. In these centers the firms are usually large and have extensive connections. They grade the cotton and arrange it in uniform lots, ship it off to mills in the North or for export. In order of rank, the big export markets are Houston, Galveston, New Orleans, Savannah, New York.

XIV

Just as *Genus Canis* signifies the beast called Dog, so does *Genus Gossypium* signify the plant called Cotton, of which there are as many varieties as there are kinds of dog. And just as Nature conspires against thoroughbred dogs from remaining thoroughbreds, she is always at work to destroy the aristocracy of pure cotton strains. When plantations were large and had private gins, cotton varied little from year to year. As soon as smaller farms and public gins appeared and as soon as new varieties of cotton were tried by enterprising farmers, a great cross-breeding began in both the gins and the fields. Ignorant that he himself had set these forces to work, the farmer at first blamed this upon inherent vice in cotton. And so he formulated the most damaging hypothesis in all agriculture: "Cotton runs down in three years; new seeds must be imported."

To combat this degradation, certain growers began specializing in seeds. But however fine the seed, one neighbor with a different variety, one mix-up in the gin, and all again was mongrelized. The government has suggested "one-seed communities," a commendable idea. But communities have been difficult to organize, and many of them have seen all their labors undone by one moment of carelessness. Yet the future of American cotton, in all its grim banality, lies in the seed.

XV

Outside of the United States more and more cotton is being grown, threatening, as we have seen, King Cotton's crown. The following are



Courtesy N. Y. Cotton Exchange

DIGNITARIES OF THE CITY ARE THE PORT COMMISSIONERS OF NEW ORLEANS, SUBSTANTIAL CITIZENS OF ONE OF THE NATION'S GREAT SHIPPING POINTS. TWELVE RAILROAD LINES HERE CONVERGE, AND HERE, IN 1880, WAS INAUGURATED THE FIRST MARKET FOR TRADING IN COTTON FUTURES. A GREAT COTTON EXPORT PORT, NEW ORLEANS ALSO RECEIVES A LARGE SHARE OF BANANA IMPORTS. THE PORT IS NOT ACTUALLY AT THE MOUTH OF THE MISSISSIPPI, BUT 107 MILES AWAY, AND LIES UNDER THE LEVEL OF THE GULF



PROBABLY THE MOST POLYGLOT CITY OF THE WORLD, ALEXANDRIA IS TODAY, AS IT WAS WHEN THE HOUSE OF PTOLEMY REIGNED, THE LARGEST AND BUSIEST PORT OF EGYPT. IT IS THE SEAT OF THE ENGLISH CHAMBER OF COMMERCE AND HANDLES MORE THAN 80 PER CENT OF EGYPT'S EXPORTS AND IMPORTS

notes on the crescendo of activity in rival nations:

EGYPT

Along the fertile Valley of the Nile many plants thrive, but of these none has brought Egypt more wealth and fame than cotton. When cotton was first planted in this region is not known, but it was long ago, even by Egyptian standards of the past. It was, however, the Civil War with the resultant high prices for cotton that gave the plant its biggest commercial impetus.

In 1861 the first "futures" market in the world was started at Alexandria, and Egyptian cotton has continued to play a big part in the commodity's world commerce. Complaints have been heard that the crop is deteriorating. Some people explain this by saying that the dams prevent the silt from flowing over the land and enriching it annually. Others claim that too much irrigation has water-logged the soil. But the most important cause seems to be mixing cotton in baling, and this rapidly is being remedied.

Although it once seemed that Egypt's long-staple cotton was a monopoly, the substitution of Upland cotton from America was found practicable. Egyptian cotton remains, however, the best for many uses, including tires, and the world will always pay well for all Egypt can produce. Last year more than 1,000,000 bales were shipped from Alexandria, England taking 369,000 and the United States 192,000.

SUDAN

While England, in corporate language, has a substantial but not controlling interest in Egypt, she does have investments with certain conversion possibilities that could give her control in an emergency. And for this reason England has to a large extent sponsored the development of Egyptian cotton. However, the finest example of British crop development is to be found in the Sudan, wholly controlled by England and sacred to the memory of Kitchener of Khartum.

Adjacent to Egypt, watered by the upper Nile, the Sudan has tremendous possibilities as a cotton producer. The crop is handled with carefully planned efficiency. The government supplies the water and land, in return receives 35 per cent of the crop's gross value. The Sudan Plantation Syndicate furnishes the minor canal system (consisting of more than 10,000 miles), carries out the first ploughing, supervises cultivation, provides ginning and storage facilities, attends to marketing, and for these many services is given 25 per cent of the gross value. The rest, of course, goes to the native tenant, whose plot has been carefully laid out for him and is on the average about ten acres. The ground is worked by powerful steam-driven implements, the cost of these operations being deducted by the syndicate from each tenant's profits. Cotton in this region is a winter crop, being planted in July, picked from December to spring.

The development of Sudan did not come about by chance, but is part of a careful policy by which Britain is attempting to become independent of American cotton.

The first organized step in this direction was the formation of the British Cotton Growing Association in 1902. In 1921 a new aid to British cotton was created, of significant name: the Empire Cotton Growing Corp. Given a grant of nearly 1,000,000 pounds sterling and conceded an additional levy of 6d on each bale of cotton purchased by English spinners in this country, the corporation has had vast funds at its disposal. With these resources it trains men, does biological research, advises on transportation problems, and in general encourages the culture of cotton. So, just as carelessness, lack of organization, and stupidity have caused King Cotton's troubles in America, the opposites of these vices have troubled him from without.

INDIA

One of the brightest jewels in the Empire's crown, but one of the most poorly set, is India. And in India, Britain has been vigorous in the arduous task of bettering the quality of cotton. Attempts in this direction have been many, probably starting with the experiments of the East India Company. The real move began, however, in 1904 when the government acted to remove the farmer from the rut wherein he had slept for many a monsoon. Credit facilities were provided, government control of seed farms inaugurated, selling methods improved, and a somewhat greater state of efficiency placed over some parts. While some Indian farmers, as in every country, are most indolent fellows, others show amazing willingness to coöperate and to work under discouraging conditions. The future of Indian cotton is, unmistakably, encouraging. The crop now threatens to displace North American cotton in the Japanese markets, and while Indian cotton reaches Great Britain in only extremely small amounts, there is every indication, as Governor Gardner points out, that a sudden rise in this direction could occur.

Severe problems still remain. Indian pickers are careless and greedy, throwing stones and earth in with the cotton, plucking ripe and unripe bolls with little care. This is attributed to the system of paying pickers a portion of the cotton they pick. The marketing system is still poor, and growers who take the trouble to separate good from bad cotton usually find they receive no more for the good, much less for the poor, and thereby lose. Usually the village shopkeeper buys the entire crop, or rather takes it in exchange for kind. All he receives he lumps together and sends off to the ginnery. This causes untold confusion and adulteration. Different weight units in various parts of the country are also a bane. In Bombay 784 pounds make a khandi. But in the southern part of Bombay things are measured by the nag, or 336 pounds. In Khandesh the khandi can be anything from 160 to 250 pounds. Other sections use the maund, although in some localities it is 42 pounds, in others 144. Thus what with the shifting khandi, the maund, the nag, the Indian planter knows not where he stands.

In volume of production India stands a poor second to the United States, with China a poor third.



SINCE THE 17TH CENTURY THE SMALL AND CURIOUS SECT OF PARSEES HAVE BEEN BOMBAY'S LEADING INDUSTRIALISTS. WHEREVER COTTON OR ANYTHING ELSE IS SOLD IN BOMBAY YOU WILL FIND A PARSEE, WITH AQUILINE NOSE, CURLING MUSTACHE, AND LIKE AS NOT, A JEWEL IN HIS HAIR



NO COTTON MILLS HAS LIVERPOOL THOUGH COTTON IS ITS STAPLE IMPORT. BALES RECEIVED HERE ARE SHIPPED TO LANCASHIRE AND WEST RIDING OF YORK

EMPIRE

India, when England turned to cotton's development, was already cotton-minded and cotton-planted. But other parts of the Empire have presented a much more serious challenge to the financial and mental resources of England and her Empire Cotton Growing Corp.

In Africa especially have the results of this work been great, but they can be even greater. Aside from the already discussed Sudan, there is Uganda, a vast province in the Dark Continent's center. Up from a pre-War yield of 25,000 bales to 202,000 last year, Uganda still needs harbors, roads, railways. But experts say that the steady crop increase will, in a few years, result in an annual minimum production of 500,000 bales. Sudan has increased from 14,000 pre-War bales to 164,000 last year, all of which was of superior quality.

Outside of Africa, cotton has been encouraged in Australia, where the production seems restricted only by the typical Australian laziness, and in Irak, where tremendous increases can be registered with drainage and irrigation.

RUSSIA

England's struggle to issue a declaration of cotton independence is being helped by increasing contributions to the world's supply from other nations.

In 1916 Russia grew about 1,160,000 bales of cotton on 2,000,000 acres of land. Revolution, rebellion, and general quarrels reduced the crop to a measly 80,000 bales by 1921. A major reason for this reduction was the necessity for growing wheat, formerly imported from other regions. Since then, as Governor Gardner notes, the crop has catapulted to 1,325,000 bales, and last year's acreage again nearly reached 2,000,000, double that of 1928.

The two greatest regions of cotton culture are not in Russia proper but in Turkestan and Transcaucasia. Cotton was probably first grown in Turkestan by the Chinese, who, realizing the difficulties caused by intense heat and slight rainfall, started irrigation works as early as the 1st century. Many of these ancient ditches are still in use, and cotton farms are widely scattered through such appealingly-titled districts as Ferghana, Sir Darya, Samarkand, the Transcaspian Territory and the tributary states of Bokhara and Khiva. The most important of these is Ferghana, which once produced over half the entire Russian crop. The district is in a long valley, irrigated by the Sir Darya River, and its cotton is almost entirely of the American type, with a long, silky staple. In the Transcaspian Territory were the Imperial Estates, laid out along the Murghab River, producing excellent cotton. The poetry-famous Oxus and the Amu Darya also irrigate this region. In Transcaucasia the development of irrigation is also very important. But work along this line and systematic handling of seed and pest-control are steadily improving Russian cotton. The growers of Bokhara have one thing to be thankful for under the new regime. In the Imperial times they could pluck no cotton before it was valued by the official assessor. Since this gentleman was usually very tardy,

(Continued on page 118)

Allied Chemical & Dye

The mysterious giant corporation . . . Its president, the able, autocratic Mr. Orlando Weber . . . Reticence as a fine and profitable art . . . Fixation of Nitrogen at Hopewell, Virginia . . . No admissions and no admittance . . . And the answer to two potent threats.

IDEALLY, perhaps, an A. Conan Doyle, an E. Phillips Oppenheim, or a R. Austin Freeman should be the author of a story concerning the Allied Chemical & Dye Corp. and Orlando Franklin Weber, its powerful but uncommunicative president. For heavily about this corporation and its corporate head hangs mystery, and nearly all its activities are seen and reported as through a denial, darkly. It is true that chemical companies generally exhibit a logical reticence about processes, and obviously one should not expect them to publish their formulas even though the so-called secret processes are seldom as vital as they appear in popular imagination. Yet the two other great American chemical companies—E. I. du Pont de Nemours and Union Carbide & Carbon—are not so sensitively reticent. The du Ponts went into motors, politics, and prohibition and have become a familiar portion of the industrial scene. Union Carbide, although with less diverse interests, is upon occasion most reasonably informative concerning even so technical a question as its contribution to alloy steels. But from Allied (and Mr. Weber) comes only an annual statement—and that of so fragmentary a nature as to leave the condition of the company (aside from its evident prosperity) considerably in question.

Thus, for example, Allied's extremely liquid assets include some \$92,000,000 in U. S. Government bonds and other investments, in the form of sound and basic common stocks. In which industries Allied has chosen to take a position and what has been the result of these investments, neither the stockholders nor the Stock Exchange itself can discover. Allied points to the gratifying increase in the size of this fund (\$10,000,000 in 1929) and considers it has done enough. Unquestionably it played its part in last fall's panic market, but no one will ever know what it bought, when it sold. It may be assumed that whatever profits Allied realized from the use of this money were carried to surplus, were not included in its \$30,000,000 net for 1929. A stockholder who once objected to the lengthy intervals between announcements from this company was politely informed that it was essential for him to have confidence in his corporation's management. In fairness, however, it should be added that such confidence has never been misplaced.

The technique of reticence

In fairness, also, a distinction must be noted between Allied and such a company as the open-hearted Ford Motor Co. While Mr. Ford himself inaugurated mass production of the cheap car and may still be said to be the leader in his field, Allied joined the industrial race a long time after the starting-gun had been fired. Mr. Ford has created his competitors, but Allied found itself, in 1920, in immediate and intense

competition with Europe and all that Europe meant in the way of a long-established chemical dominance, highly developed processes, and cheap labor. Allied's problem was to make a product as good or better than the German product, with higher labor costs, at a cheaper price. Such a great competitor as the I. G. Farbenindustrie badly underestimated Allied's potentialities, and Allied had nothing to gain by correcting the estimate. The size of its plants, the nature of its machinery, and the number of its employees, therefore, were not made matters of public concern.

This is still true. No one outside the company, and very few inside it, know the current production of the great, new nitrogen fixation plant at Hopewell, Virginia, or what variation of the Haber-Bosch process is used there, or how much man power it requires. Mr. Weber himself has never been at Hopewell, nor has any director of the company; and it is said that only five men at the central office can fully interpret the reports which come each month from Hopewell to Mr. Weber's desk at 61 Broadway. Again, Hopewell is not like Dearborn. Hopewell is a vast undertaking, a promise; Dearborn is a fact.

Thus Allied has gone its way with no accompanying trumps. Mr. Weber has never given an interview nor made a speech, and under only one document—the 1929 annual report—has he signed his name. He has a philosophy of business no less interesting than that of Mr. Ford (whom he greatly admires), but it reposes upon no bookseller's shelves. It is no more public property than the Hopewell accounts.

This impenetrable reticence has irritated a good many people. Allied dislikes cartels and is unimpressed by associations for the furtherance of this or that. Accordingly when that notable crusader, Mr. Francis X. Garvan, urged Allied to join a group of chemical companies to protect the American industry against Germany, Allied replied in effect that two protectors were perhaps better than one and that while Mr. Garvan's group was protecting America in one way, Allied would protect it in another. This aroused Mr. Garvan to such a pitch of irritation and suspicion that he even harbored thoughts that Allied was on the German side of the fence. Later he accidentally discovered that the precise reverse was true, and he is now a staunch friend. Dr. Carl Bosch, the genius of the I. G. Farbenindustrie, has not been converted. He has invited Mr. Weber to inspect the vast nitrogen plant at Leunawerk, and while Mr. Weber did go to Leunawerk, he observed that war-time monument from the outside. This proceeded neither from modesty nor from a lack of grace, but from an unwillingness to accept a courtesy he could not return. The world knew about Leunawerk; it did not know about Hopewell.

Allied's success in its ten-year lifetime has been phenomenal.

Whether or not the reticence policy is to be commended in theory, there can be no doubt but that it has been profitable in fact. As a result of attending strictly to its own business and encouraging a similar policy in others, it has been free to bring that business to a pitch of efficiency which is outstanding in an efficient age. To a brief consideration of that efficiency, it is now useful to turn.

Allied's Weber

The Allied Chemical & Dye Corp. is a normal artificial person, incorporated in New York, with the usual complement of officers and directors. Until last year it had a normal chairman of the board, in the person of the well-beloved Dr. William H. Nichols. In form, it scarcely differs from any large manufacturing company, with seventy-two plants spread over the country, each with its superintendent, each reporting to the headquarters in New York. The only extraordinary thing observable by an outsider is the absence of any obvious banking connection. Allied has never increased its original 2,000,000 shares of common stock (nor has it split them). Thus it has escaped the usual branding as a Morgan (Kuhn, Loeb; Bonbright; etc.) company.

But upon closer study, even more striking differences are traceable behind Allied's conventional façade. There is, for example, the matter of the directors. A book could be written about the directors of the Allied Chemical & Dye Corp. These men, all deeply concerned in the company's prosperity, representing the original families which pooled their interests to create Allied, constitute one of the most harmonious bodies on record. There are several reasons for this: for example, the company's gratifying success. But the chief reason is unquestionably the power and prestige of the company's chief executive officer.

For, in the final analysis, it is Orlando F. Weber who runs the Allied show. When the merger had been completed, he was asked to head the new company, and with some reluctance agreed. The decision once made, however, Mr. Weber's hesitancy disappeared. He faced the facts of 1921 with a vigor which always astounded and occasionally angered the older men of the merging companies. Inventories were big, selling prices were high, and business was bad. Out of the situation

itself arose policies of drastic reorganization. Personnel was carefully combed, and many a boom executive found himself—together with his fellows in other industries—fighting for his job. A rigid system of monthly reports was instituted. Sales and costs figures underwent cold scrutiny. Executives were taught to look upon accounts, not as necessary book-keeping, but as vital photographs of the companies.

With such directness did Mr. Weber apply his technique of operation to the new company, and with precisely the same directness is that technique applied today. Allied is now a company where man power is the all-important source of wealth; it is a company with a vast confidence in youth, and a willingness to back that confidence with a considerable investment. Promotion is swift, responsibility heavy. When youth fails, it is instantly replaced. But in ten years, it is said that Allied has made only seven such mistakes. Such a policy naturally provides both an operating staff and an executive reserve. Upon that reserve Allied expects to draw in the years to come, and it is possible to consider it Mr. Weber's answer to the question of what Allied will do when he retires.

For the question is both natural and frequent. Mr. Weber is the complete autocrat, a dictator as absolute as Mr. Ford, and rather less approachable. Away from his office, he is social, genial, wise, a fifty-year-old student of James and Emerson, a thoughtful and intelligent father of two small children. But in his office, he rules without fear and without compromise.

The great decade

This, then, is the machine which Mr. Weber began to build in the shadows of the panic of 1921. It has created a great company and has largely helped create a great American industry. It is currently said that (a) the U. S. chemical industry has a production equal (in dollar value) to the production of the iron and steel industry and (b) that Allied is the greatest chemical company in the world. Both statements have a basis of fact, but both are subject to severe qualification. As long ago as 1925 the United States Government, in its census of manufactures, estimated the value of chemical products at \$6,400,000,000. This total was reached, however, by assembling nearly every industrial process involving chemical reactions, and was weirdly inaccurate from the standpoint of products turned out by strictly chemical companies. It included, for instance, the manufacture of gas and the refining of petroleum. It also threw in glue, paint, varnish, and soap. If only chemical noses, in the stricter sense of the term, were counted, the products of chemical corporations would have been figured at about \$813,000,000, or approximately the output of the tobacco or the rubber businesses. Also a



Underwood & Underwood
EUGENE MEYER



Brown Bros.
THE LATE DR. WILLIAM H. NICHOLS

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Industries or a German that it was greater than I. G. Farbenindustrie. Allied is, of course, the outstanding American example of a manufacturing company dealing in such diverse things as acids, alkali, coal-tar products, dyes, and sodium nitrate. An analogy could be created by supposing the existence of an American Metals Co., owning and *operating* the U. S. Steel Corp., Anaconda, and the Aluminum Company. No one of Allied's companies is more than theoretically familiar with the methods of any other.

Considering this distinction, it is undeniable that Allied, largest producer of alkali, coal-tar products, nitrogen, etc., is the major factor in that wide industrial field so loosely labeled *chemicals*. Even aside from its automobiles, the du Pont company deals largely with nitrocellulose in peace and war, while Union Carbide centers around oxygen, calcium carbide and its associates. For a strictly chemical company and for a company which sells almost exclusively to other manufacturers and hardly at all to the general public, Allied has built up an extremely large business on an extremely unspectacular foundation. Furthermore, it is currently beginning to specialize in at least one field—the production of synthetic ammonia—in which it has far outstripped its American competitors. And certainly its financial statements bristle with large, round figures indicative of profound solvency. With no funded debt, with a depreciation fund of \$110,000,000 (du Pont's is \$44,000,000), net working capital of \$148,000,000 (du Pont's is \$85,000,000), current assets of \$157,000,000 (du Pont's are \$116,000,000), and the investment fund already referred to, Allied is in a position of great strength. It has no fear of scrapping old for new. When the experimental plant was built at Syracuse, Allied put \$5,000,000 into the venture and knew it must abandon it inside a decade. Each one of Allied's plants is subject to the same ruthless treatment. Another little-realized source of strength is its identification with the necessities of industrial life, there being no consumer vagaries or style declines in the consumption of such commodities as sulphuric acid, alkali, and sodium nitrate.

Non-mysterious, aloof

In this last fact lies yet another key to the mystery which appears to surround the Allied Chemical & Dye Corp., enveloping alike the National Aniline plant at Buffalo, the Solvay Process plants at Syracuse, Detroit, and Hutchinson, Kansas, the Atmospheric Nitrogen plant at Hopewell, Virginia (an un-garden city near Richmond), or any of the numerous plants operated by the Barrett Company or the Semet-Solvay Company. What makes these walls so forbidding, these offices so private, these grasses so kept off of? Partly a policy, but even more a remoteness. For (with very rare exceptions) the Allied companies make nothing that goes into the hands of the general public, nothing that the consumer touches or recognizes or is conscious of in more than the vaguest academic sense. Allied is essentially a middleman company, taking raw materials, putting them through various stages of manufacture, then selling them to some other industrialist through whom (usually in a thoroughly disguised and often unsuspected form) they ultimately become consumer items. There is one conspicuous exception to this statement, however, for the Barrett Company (largest Allied unit) does approach the consumer by way of the Barrett roofs over his head and by the Tarvia roads under his auto wheels and sometimes by the Barrett Queen Bee Coke in his furnace. But most, even of the Barrett products, mean little to the consumer's mind. The dyer buys naphthalene and benzol, the tanner

buys Barretan tanning extract, the builder buys creosote to preserve wood, and Dr. Baekeland's Bakelite Corp. may buy phenol to make Bakelite. Thus most of the Barrett products are intermediates subject to further processing or incorporated in some further product before reaching what is to the consumer a real and a tangible world.

And so it is with other Allied products. We do not see in window glass the soda ash which has gone into its construction; we do not realize that our soap is fat plus caustic soda; we therefore fail to appreciate what the Solvay Process Company is doing for us. If the dyes in our clothing do not remain fast, we complain to the clothing store and the clothing store complains to the clothing manufacturer and perhaps the clothing manufacturer complains to National Aniline, but by that time we have received our money back and lost interest in the sequence. As for General Chemical Co., its basic product is sulphuric acid, but unless we need to purify some petroleum, to "pickle" (remove the scale of iron oxide) some steel, to mix sulphuric acid with ammonia and get fertilizer or with nitric acid and glycerine and get dynamite, we are familiar with sulphuric acid largely through the adjective *vitriolic* and through those fortunately rare occasions on which angry persons go about throwing sulphuric acid (or oil of vitriol) in faces. There is no great mystery about most of what Allied does—caustic soda and sulphuric acid, for example, are thoroughly standardized products though their processing may vary from company to company and country to country. Indeed the whole function of (for instance) sulphuric acid of a given concentration depends upon its being precisely like every other equal concentration of sulphuric that ever has been made or ever will be made by any manufacturer whatsoever. But because nearly all Allied products are aloof from the outsider and not especially thrilling to him, he drapes Allied thickly in the majesty of his own ignorance and then gasps at its progress and profits.

Nitrogen fixation

One Allied division, however, the Atmospheric Nitrogen Company, is of more general interest, partly because of nitrogen's war-time importance in explosives and peace-time importance in fertilizers and partly because nitrogen fixation is a recent and current development and properly regarded as one of man's most successful and most fundamental experiences in overcoming the stinginess of nature. Nitrogen is an essential of explosives and also of plant food. It is a very common element (the earth's atmosphere weighs roughly some 5,333 million-million tons and three-fourths is nitrogen), but for practical purposes nitrogen needs to be combined with some other element (i.e., to be fixed) in order to be usable. In pre-War days, nitrogen suitable for fertilizer was found chiefly in nitrogenous waste material from birds (guano deposits) and beasts (manure) and in natural deposits of sodium nitrate in Chile. There was also beginning the development of ammonium sulphate (which contains nitrogen), a development which is still of the first importance and in which the Semet-Solvay Company participates. High explosives, however, were made largely from sodium nitrate so that Chile had practically a monopoly on explosive raw material. Two processes, the Arc and the Cyanamide, had been devised for forcing nitrogen to combine with other elements (oxygen and calcium carbide respectively), but both were extremely expensive. Then, just before the War, the German Badische-Anilin-und-Soda-Fabrik (now part of I. G. Farbenindustrie) introduced the Haber-Bosch ammonia process by which most

[Continued on page 130]

Properties v. Principles

The road from Textbook through Laboratory to Factory and how slowly it is traveled. "Not Angels, but Angles."

CONSIDER, for a moment, the case of Dr. Gilbert N. Lewis and the case of Dr. Edward G. Acheson. Dr. Lewis has an idea (described in more detail in the following pages) that time goes two ways and that, from the standpoint of science, a distinction between the past and the present is hardly more than an idle superstition. Interesting is the Lewis Theory, arrived at by one of the world's greatest physicists, and a New Idea, just as, at one time, the suggestion that heat was not a substance but a form of energy was a New Idea. Yet the Lewis Theory does not butter any parsnips. It does not enable anyone to make anything, to make anything better, or to make any more of anything. It has everything to do with Thought but it has nothing to do with Substance. It is precisely the type of theory that makes stupid people sneer at theorists.

Dr. Acheson, on the other hand, discovered carborundum (also more fully described below). The fact that carbon and silicon, when heated, will combine, coupled with the fact that the combination is one of the hardest of materials, gave Dr. Acheson an extremely valuable abrasive which has since come into the widest industrial use. And this Acheson Substance is often referred to as an outstanding example of applied science. But of what is it an application? Evidently not itself a theory, it is equally not the application of a theory. Theories are not held about such things as whether silicon and carbon will combine when heated and if so whether they will produce a hard substance. If the supposition arises, the experiment is made and the fact determined. To call the discovery of carborundum an application of science, it would almost be necessary to go back to the formative period of chemistry in which the idea of carbon and the idea of silicon were original concepts in the sense that the Lewis Theory is an original concept today. Carborundum has nothing to do with contemporary thought or with recent thought. If its discovery could be called the application of anything, it could best be called the application of heat.

And here, generally speaking, is exactly the difference between what is commonly called pure science and what is commonly called applied science. Here is also the explanation of the fact that in a period in which we hear so much of applied science, it is ordinarily so difficult to isolate the sciences back of the application. There is a widely held theory that the factory of today is built on the textbook of tomorrow. This is a pleasant theory because it enables people who think that astronomers are a waste to tolerate them by remembering that weather reports are useful. Yet it is a slippery half-truth, the percentage of error lying in the assumption that the industrialist gets his theory while it is recognizable as such. As a matter of fact, by the time the secrets of nature have become incorporated in progress, they have usually long since ceased to be confidential. The applied scientist is not interested in the principles of science; he is interested in the properties of substances. And he is usually interested in the properties of substances so long established, so long classified that the theorist has long ceased to show interest in them.

Indeed, it is almost back to the time of Lavoisier, who was guillotined in 1794, that pioneers of science were interested in the simple elements and in the simple manner that the usual industrial chemist is interested in them today. It is certainly true that there could not well have been much industrial chemistry at a time when the best chemical minds thought, for example, that water was an element and that a substance called phlogiston was the stuff of which fire was made and that a burning substance gave up its phlogiston. When Lavoisier showed that water was a combination of hydrogen and oxygen, when he showed that combustion was a union with oxygen, and when he drew up the first tentative list of elements in the modern chemical sense (as opposed to the ancient "elements" of fire, earth, air, and water), he was a theoretical pioneer whose discoveries have certainly had a very wide application indeed. But the theorist of today has proceeded far beyond Lavoisier. He has looked so far inside the atom that he is currently worried about whether matter is composed of particles or of waves, a speculation which emphatically does not lend itself to industrial purposes. As far as elements of different kinds of tangible, dimensional things are concerned, he knows (or feels very sure) that there are ninety-two elements, that two have not yet been discovered, that one of the missing two is about as heavy as iron and melts at the melting point of tin, and that the other resembles the alkali metals and has an atomic weight of about 224. But it is not the properties of any element as much as the structure of all elements that interests him, and surely most of his current speculation is useless in any narrow and pragmatic sense. It is such stuff as dreams, but not fertilizers, are made of.

The industrial chemist, indeed, derives not so much from chemistry as from the other half of his title—industry. He is very often at least as much an engineer, an operating man, as a researcher, an experimental man. Sometimes he is engaged in the large-scale production of something previously produced only in the laboratory. Sometimes he finds a new source of a substance or a new use for a substance or a more economical method of producing a substance. And sometimes, in somewhat the tradition of Dr. Acheson, he mixes old substances together and produces something not previously known on the earth. But between him and the nonindustrial researcher there lies almost always the double chasm of mass production and unit cost. Until a process has become fool-proof it is not profitable to the industrialist, and after it has become fool-proof it is not interesting to the scientist. The run-of-mine product of commercial chemistry represents an application of the principles of the science to about the extent that the adding machine represents an application of the principles of mathematics.

There remain, however, some industrial organizations which can afford to support the experimenter and his experiments. One such organization is the General Electric Company, and one instance of a most happy union between Science and Industry is found in the work of Dr. Irving Langmuir.



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THE "FATHER OF CHEMISTRY" AS ENEMY OF THE PEOPLE—LAVOISIER'S ARREST BY THE TERROR

Dr. Langmuir entered the employ of General Electric primarily to produce a better electric light. He worked for some years upon a general study of electronic emissions in vacuum, a study in which he himself said that he could see no practical application but in which Dr. Whitney, head of the General Electric laboratories, encouraged him to continue regardless of practical results. Eventually Dr. Langmuir not only succeeded in producing the better light (the nitrogen lamp), but also supplied (in his concentric shell theory) a marked addition to the world's knowledge of atomic structure. It will be remembered that this discussion began with Dr. Lewis as an instance of the nonindustrial scientist. In Dr. Langmuir the circle is completed, for much of Dr. Langmuir's contribution to the theory of how atoms are put together continues and develops the work of Dr. Lewis along the same line.

So there is some direct connection between Mind and Matter, and sometimes the textbook and the factory do go to school together. And of course it has been many years since there has existed any real doubt concerning the value of the industrial chemist, either from the standpoint of private profit or of public weal. It may seem rather ungracious to insist that the applied scientist is usually getting his rabbits out of very

old hats. Yet the industrial chemists themselves (or rather, perhaps, their apologists) have a certain tendency to conceal the hat and focus the attention upon bunny's bright eyes and silky ears. The industrial chemist has recorded a performance and achieved a stability which makes superfluous any aroma of magic and of mystery. He is an industrious, an able, a gifted worker, making to society a contribution of unquestioned value. But he ought not be regarded as a magician and his work should not be considered as wizardry, nor should the theory of today be expected to turn up in the cannery of tomorrow. There is an old story about a Roman Churchman who, seeing in the streets of Rome some slaves imported from Britain and struck by their blond hair and blue eyes, exclaimed, "Not Angles, but Angels." Perhaps puns, like the Time of Dr. Lewis, may need to reverse themselves in order that an equilibrium may be reached.

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One of the strongholds of the miraculous interpretation of applied science has been recent popular literature on the industrial chemist, a literature which usually considers itself compelled to "sell" the scientist as a useful person and preaches a kind of "muscular chemistry"

designed apparently to demonstrate that one ought not lift the eyebrows at test tubes and retorts. A good deal more illuminating volume on chemistry (chiefly pure chemistry) is a book to be published in June by Simon & Schuster which has appeared serially in the *Forum*. Titled *Crucibles*, written by Bernard Jaffe, chemistry instructor in New York, and the object of a joint Simon & Schuster-*Forum* award of \$7,500 as year's best book from the standpoint of "humanizing knowledge," this volume is semibiographical, semihistorical, tracing the progress of chemistry from the 15th century through the lives of such outstanding chemists as Priestley, Lavoisier, Dalton, Mendeleef, Thomson, and Langmuir. There is a tendency to approach the subject from a consideration of chemical St. Georges slaying natural dragons, and the biographical portion of the sketches is necessarily superficial and uncritical.

On the other hand, however, the discussion of chemistry is immeasurably more specific and informative than might have been expected, and the entire field of theoretical chemistry has been oriented in a uniquely illuminating manner. The extremely difficult problem of presenting scientific knowledge in a manner that is interesting to the layman without being offensive to the scientist has been ably and successfully met.

Carbonyl Chloride Dr. Francis C. Frary



PHOSGENE first became internationally prominent in December, 1915, when the German troops on the West Front added it to the chlorine which they had introduced in April of the same year. It became extensively used by both the Germans and the Allies, the French being particularly partial to it in the form of a sixty-pound shell containing thirty pounds of phosgene. Phosgene (carbonyl chloride, COCl_2) is a combination of carbon monoxide and chlorine. Air containing one part in 100,000 of phosgene will produce disability through acute irritation of the lungs, and the continued inhalation of larger concentrations results fatally. Although not as fatal as hydrocyanic gas, and dissipating more rapidly than mustard gas (which produced probably a majority of the War's gas casualties), phosgene was more toxic than straight chlorine and was particularly useful at Verdun in 1916 and Arras in 1917.

After the United States entered the War, the government arsenal at Edgewood, Maryland, became a center of phosgene production with Dr. Francis C. Frary, now director of research at the Aluminum Co. of America, and Major D. J. Demorest in charge of

large scale phosgene manufacture. It is not difficult to make carbon monoxide and chlorine unite (exposure to sunlight is sufficient for the reaction), but for quantity production it was necessary to pass the two gases over a catalyst of specially prepared charcoal. With the close of the War, phosgene reverted to its former relatively obscure function as a maker of intermediates in the dyestuff industry.

In addition to his work with phosgene, Dr. Frary is also the inventor of Frary metal, another War baby. A hard alloy of lead, used in shrapnel bullets, it is composed of 85 per cent lead and 15 per cent antimony. During the War antimony (mostly imported from China) was scarce and hard to get, so Dr. Frary substituted barium and calcium for antimony and got nearly as hard an alloy. Frary metal has a peace-time use as a bearing.

Dr. Frary has been with the Aluminum Co. since 1918. He has developed the electrolytic refining of aluminum to a point at which aluminum of 99.95 per cent purity is produced. He is a graduate of the University of Minnesota (where for some years he taught chemistry) and studied also at the University of Berlin.

Nitrogen Lamps Dr. Irving Langmuir



U. & U.

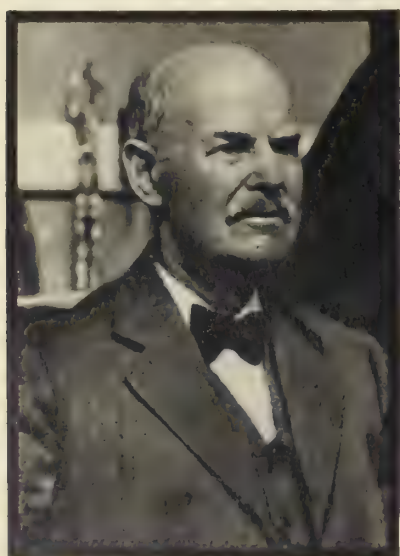
EVER since Edison made the first electric light bulbs, the fact that the vacuums in them were not complete was blamed for the various imperfections they exhibited. When Dr. Irving Langmuir began working on bulbs in the General Electric laboratories at Schenectady, he purposely made bulbs with very poor vacuums and discovered that they were no worse than those with the highest vacuums possible. Thus he discovered that everyone had been on the wrong track and that poor vacuums did not necessarily make poor lamps. He then found that the real trouble lay in the evaporation of the tungsten filament, emanations from which later formed on the walls of the bulb. He decided, therefore, that what the bulb needed was not a high vacuum but the addition of a small amount of inert gas which would not enter into any reaction with the filament, but would reduce evaporation. Such an inert gas is nitrogen, and today, as the result of Dr. Langmuir's independent thinking, the best electric light comes from nitrogen lamps.

While working on bulbs Dr. Langmuir learned a great deal about vacuums and later applied this

knowledge to the development of an improved radio tube, Langmuir patents now forming an important asset of Radio Corp. of America. Although more a physicist than a chemist, he is one industrial scientist who has added materially to the world's store of knowledge. Dr. Langmuir is an enthusiastic advocate of educational methods which encourage the student to learn for himself instead of remaining passive while being crammed with information. In a discussion of this topic of individual experiment, he told of a six-year-old boy who collected insects, weighed them on a fine scale, dried the water out of them, and weighed them again, keeping careful notes of the weight difference between the hydrous and anhydrous bugs. "I am afraid," said Dr. Langmuir, "our universities . . . tend to discourage such wholesome individual activities."

Dr. Langmuir has been a General Electric researcher since 1909, holds degrees from the Columbia School of Mines, the University of Göttingen, Edinburgh University, and Columbia University. His older brother is a chemist in New York City; he himself began chemical experiments at the age of seven.

Coke and Clay Dr. Edward G. Acheson



U. & U.

WHEN two substances are rubbed together, the softer is worn smooth and the process is called abrasion. Sandpaper and emery wheels are common abrasives, and the proverb about having one's nose on a grindstone is an illustration of an abrasion process. The most widely used industrial abrasive, however, is carborundum, which Dr. Edward G. Acheson discovered in 1891. Dr. Acheson was primarily an electric light man (he had worked for Thomas Edison at Menlo Park), but he was also an inventor and in 1891 he had an urgent necessity to invent something which would make him some money. He remembered that Dr. George F. Kunz of Tiffany's had told him jewelers needed a good abrasive and also remembered a laboratory experiment in which pieces of clay had become impregnated with carbon and gained in hardness. So he took some clay and some coke, mixed them together, put them in a crude form of electric furnace, and heated them up. When his mixture had cooled off, he discovered that some of the clay had combined with some of the coke to form a new compound and that this new compound was hard enough

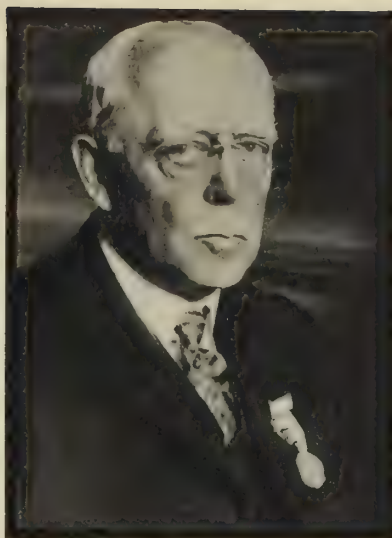
to cut and grind diamonds. Dr. Acheson thought that his new substance was made up of carbon and corundum, so he called it carborundum. It was really composed of silicon and carbon and is properly known as silicon carbide, but carborundum is its commercial name.

Today carborundum has a wide industrial usage. It puts points on phonograph needles and fountain pens. It polishes marble and sandstone. It cuts, grinds, and polishes precious stones. It makes locomotive wheels round and smooth. The Chinese polish jade with it, and the East Indians use carborundum wheels to hull rice. Dr. Acheson's original Carborundum Company soon got out of his hands and came under Mellon control. His Graphite Company (based on his discovery that from carborundum could be obtained a form of graphite purer than the natural product) became a subsidiary of Union Carbide & Carbon. As for Dr. Acheson himself, he is now seventy-four years old and lives mostly in St. Petersburg because he does not like cold climates, and even St. Petersburg is hardly warm enough for him.

Silk from Sow Dr. Arthur Dehon Little

DR. ARTHUR DEHON LITTLE is a distinctly Bostonian chemist who collects Chinese porcelains, smokes Pall Malls, and contributes to the *Atlantic Monthly*. In 1886 he went into business for himself as one of America's pioneer consulting chemists. He spent a good deal of time analyzing water at \$5.00 a specimen and sugar at seventy-five cents a specimen, and in the first year the firm made only \$600. But Dr. Little hung on, the value of chemists and chemistry became yearly more important, and today the Little research laboratories on the banks of the Charles River (adjacent to the buildings of Massachusetts Tech, at which Dr. Little studied and whose School of Chemical Engineering Practice he founded) are show places of science as well as sources of profit. The list of his accomplishments includes the reclamation of turpentine and resin from cut-over lumber, the utilization of wood wastes in paper, a "vapor phase" cracking of petroleum which yields an antiknock gasoline, and the development of the Schultz process for chrome-tanning leather.

Unlike many chemists, either applied or academic, Dr. Little is able to interpret as well as exemplify the scientific mind and is one of the most advertised of chemists. He has long and eloquently preached the gospel of research and has interested many a manufacturer in supplying research funds (notably George Eastman's contributions to M. I. T.). He is an excellent talker and writer, and such aphorisms as "There is great danger in an organization chart. Someone might mistake it for an organization" have been widely quoted. A prize exhibition in his laboratory is a silk purse, manufactured from a hog's ear. Dr. Little got the ear from a packer, made it into artificial silk, and thus showed the fallacy of the ancient proverb that out of sows' ears silk purses cannot be made.



International

Meatless Meat Dr. David Wesson

CHEMISTS who attended the April convention of the American Chemical Society in Atlanta ate, among other foods, sandwiches made of what the newspapers wittily described as "cottonseed sandwiches." More properly speaking, the sandwiches were filled with Wessona, a meat substitute which Dr. David Wesson, its inventor, describes as "palatable and nourishing." Wessona is a product of the cottonseed, has become a valuable by-product. The oil from the seed is made into salad oils (such as Wesson Oil) and lard substitutes (such as Snowdrift). And in Wessona, Dr. Wesson has discovered that the left-over pulp can be made into a substitute for meat. It has certainly the advantage of economy, since beefsteak, with about 35 per cent protein, sells for forty cents a pound and cottonseed meat, with 60 per cent protein, for around five cents a pound.

Dr. Wesson graduated from M. I. T. in 1883, worked for the N. K. Fairbanks Co. (lard refiners) and then for the American Cotton Oil Co., where he was for five years chief chemist. In 1895 he went into the manufacture of bicycles, but while making bicycles continued oil experiments and discovered improvements in production that resulted in what he considered the finest and least odorous cottonseed oil ever extracted. So he helped organize the Wesson Process Co., put Wesson Oil on the market, and has been in the cotton oil business ever since. He is more than enthusiastic about the future of Wessona and only hopes that he lives long enough (he is sixty-nine) to see its acceptance as a staple of the nation's diet. Meanwhile, there is no question but that the development of cottonseed oils and shortenings has enabled the cotton raiser to sell, at \$32 a ton, cottonseed which he formerly threw away and which in some years have a value equal to almost one-sixth of that of the cotton itself.



Acme

The Nitric Acid Family Dr. Charles L. Reese

WHAT is commonly known as an explosion is the result of a combination of solids changing into a combination of gases, with the gases occupying a much larger space than the solids from which they come. When a group of selected solids, tightly packed in a steel case, changes into gases, the force of their expansion is sufficient to blow the steel case to pieces. And of course any persons (such as soldiers) in the vicinity are likely to be wounded or killed.

The active agent in most modern high explosives is nitric acid, the expanding gas therefore being nitrogen. In addition to nitrogen, the ideal explosive should have also carbon, hydrogen, and oxygen, all of which burn readily and heat up the nitrogen, making it expand much more rapidly. Thus cotton (which is a combination of carbon, hydrogen, and oxygen) and nitric acid (which is a combination of nitrogen, hydrogen, and oxygen) together form the nitro-cellulose explosive family commonly known as guncotton. A mixture of nitric acid with toluene (another carbon-hydrogen combination) results in the trinitrotoluene so famous as TNT. A liquid form of the nitro group is nitroglycerine,



Keystone

made by adding glycerine to a mixture of sulphuric acid and nitric acid. This liquid, however, is much more usable when it is absorbed in some suitable solid, in which condition it is known as dynamite.

As the nitro family was discovered chiefly about the middle of the 19th century (although

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TNT is a 20th century German development), modern explosive men have been engaged chiefly in refinements and improvements and also in adapting explosives to peace-time activities. Thus Dr. Charles L. Reese, for many years chemical director of E. I. du Pont de Nemours and now consultant of the same company, is perhaps most famous as the man who "disarmed dynamite" by turning large quantities of a left-over war-explosive (it was TNT, not dynamite) into a less dangerous industrial explosive called Sodamol. Dr. Reese has also made two important contributions to the safety of miners. When dynamite froze (as often), miners frequently thawed it out by toasting it over a fire. Though not as suicidal as it may seem, this procedure did result in many accidents, so that Dr. Reese worked out a nonfreezing dynamite which never required toasting. He was also prominent in the American development of permissible explosives, i.e., mining powders which leave behind them no lingering flame to ignite coal gas or other combustible portions of the mining atmosphere. From April, 1917, to November, 1918, the American explosive industry produced 375,656,000 pounds of military explosives, a large percentage of which were prepared by Dr. Reese and the 1,200 chemists who made up his War-time staff.

Absolute Alcohol
Dr. Milton C. Whitaker



DR. MILTON C. WHITAKER, at one time professor of chemical engineering at Columbia, formerly vice president of the U. S. Industrial Alcohol Co., vividly illustrates an outstanding difference between research and operating chemistry. That difference, crudely stated, is that the research chemist is making something; the operating chemist is making something that can be sold at a profit. Much of Dr. Whitaker's work involves the manufacture of alcohol, a problem which lost its research significance about 1818. But from an operating standpoint the process is as currently important as the earning statements in which its results are reflected. Or, taking a more specialized example, Dr. Whitaker did no new thing in producing an absolutely pure, anhydrous (waterless) alcohol. Absolute alcohol had long been familiar to laboratory men, but on a scale and at a cost that made it familiar to laboratory men only. To produce absolute alcohol in carload lots, at a cost low enough to permit its use with gasoline as a motor fuel, involved a discarding of the research process and the development of an economic engineering method to attain the same result.

Dr. Whitaker has therefore been a director of chemical engineering rather than a researching chemist. To produce a new product, he first builds an experimental plant which functions both as a large laboratory and a small factory. As a laboratory, it works out a process or arrives at a product. As a factory, it manufactures and sells the product. Not until the product has been sold and has stayed sold (with the trade) is the experimental period over and mass production begun.

An organization man who is suspicious of over-organization, Dr. Whitaker is tight-lipped, sharp-eyed, eminently practical and eminently square. At Columbia he was as likely as not to devote a chemical engineering period to a discussion of a longshoreman's strike or some similar current event. Said one student, awkwardly but sincerely, "He taught us to think like engineers and to behave like men." Said the more polished Dr. Nicholas Murray Butler: "We look upon him as one of our own and follow his career with pride and satisfaction." Dr. Whitaker is now president of the Catalytic Process Corp.

Separated Sands
Mr. John Van Nostrand Dorr



CHEMISTS familiar with Markham's *Man with the Hoe* might be tempted to call John Van Nostrand Dorr the *Man with the Rake*, for it is certainly upon a raking invention that Mr. Dorr's large company and large reputation are securely founded. In 1904 Mr. Dorr had an interest in a South Dakota cyanide plant for extracting gold from ore. One of the most difficult problems was that of classification. When a mass of crushed ore is carried in a stream of water it is necessary to classify it, that is, separate the larger particles of sand from the smaller ones of slime. Early classification depended upon gravity alone, the stream of ore and water flowing slowly through a conical vessel, with the heavy sand settling to the bottom and being discharged from the point while the light slime overflowed at the circumference. This separation was incomplete, and the sand clogged up the cone.

Mr. Dorr rigged up an inclined trough with the upper end open and equipped with a series of rakes which continuously dragged the settled sand from the trough at one end while the unsettled material overflowed at the other. From so simple a device came not only the

transformation of an unpaying mine into a mine sold later for nearly \$1,000,000, but the beginning of a whole family of Dorr machines for mechanically classifying, thickening, and agitating solids suspended in liquids. Nearly all hydraulic refining employs Dorr machinery, which is also used in many chemical processes, in sewage treatment, and in the purification of water. Municipal sewage treated by Dorr methods is estimated at more than 1,250,000,000 gallons per day; Dorr-treated drinking water at 125,000,000 gallons.

Mr. Dorr was born in Newark, New Jersey in 1872, graduated from Rutgers in 1894, worked for a time with Thomas Edison, traveled to South Dakota where he worked in the hard old mining town of Deadwood. Since his second marriage he has acquired an appreciation for music, sculpture, and other arts and spends most of his summers in Europe. His stepdaughter (Mrs. James Warburg) wrote the lyric for "Can't We Be Friends?" in the *Little Show*. A practical application of his interest in music is seen in his support of the music school at Greenwich House, Manhattan settlement house where worked flying Amelia Earhart.

No Past, No Future
Dr. Gilbert N. Lewis



SCIENCE has still its frontiers, its new generalities and hypotheses. Thus when, in April, Dr. Gilbert N. Lewis, physicist and chemist of the University of California, acknowledged receipt of the 1930 medal of the Society of Arts & Sciences, he advanced a theory which, sensationally expressed, denies the idea of time; or, less melodramatically, substitutes two-way for the one-way time ordinarily conceived.

Scientific thought, said Dr. Lewis, has long been corrupted by attributing to natural processes a human nature. There is in nature no compulsion; what we call the *law* of gravity is simply the record of repeated experiences. There is no reason why a ball drops to the earth; if it should fly up to the sun and break gravity's *law*, it would be no miscreant, no criminal. To the experiences, the happenings of the *physical* world man has wrongfully added his own *psychological* attributes of cause and effect and purpose.

And the ordinary concept of time, the concept that time is finished and the future not begun, Dr. Lewis considers metaphysical and unscientific. "One must never attempt [from a physical standpoint] to dis-

tinguish between the past and the future." Old ideas concerning light rays, for instance, were based on the temporal fallacy. Light came from a source, scattered out into infinity, could never be re-collected. Thus any brief candle, once out, would light no more fools the way to dusty death. But (says Dr. Lewis) this idea is not correct. "The energy from an emitting atom does not spread out through space but goes in its entirety to one other atom, and this is a process which is symmetrical with respect to the past and the future. Thus the light does not go out, but goes to another atom and may come back again, and the process is infinitely repeatable.

"There have been many," continues Dr. Lewis, "who have realized that just as a pack of cards, if indefinitely shuffled, will eventually return to its original arrangement, so any physico-chemical system, when left to itself in any initial state, must return to that state. I do not say that the whole universe . . . will sometime return exactly to the condition of the present moment but [from the standpoint of physics alone] this is the conclusion."

Phenol-Formaldehyde Dr. Leo H. Baekeland

DR. LEO H. BAEKELAND is one of the chemists who has given us things. Specifically, he has given us Bakelite, described (by Bakelite Corp.) as the "material of a thousand uses." Bakelite is made by combining phenol, a coal tar product known also as carbolic acid, with formaldehyde, made from wood alcohol. Phenol is also used as a disinfectant, and formaldehyde, in embalming fluids, but even before Dr. Baekeland's experiments a great many chemists had attempted to join the two in the manufacture of a synthetic resin such as is naturally produced by pine trees. Dr. Baekeland, not only studying the literature of the reaction, but also deliberately repeating his predecessors' experiments to see why they had failed, discovered how to control the reaction in definite, practical ways to obtain products of the resinoid type which had strength, toughness, resistance to heat and to chemical attack. His resin was such a poor conductor of electricity as to make an excellent insulator. Today, in various of its forms, Bakelite is used for such varying objects as airplane propellers, cigarette holders, fountain pens, billiard balls, radio panels, telephones, automobile steering wheels, and insulation of every type.

Dr. Baekeland was born in Ghent in 1863, graduated from the University of Ghent, and won a traveling scholarship which brought him to this country in 1888. One of his earliest interests was photography, and long before the discovery of Bakelite he had invented Velox paper and sold the process and his manufacturing business to the Eastman Kodak Co. With the proceeds of Velox he settled in Yonkers and devoted himself to his phenol-formaldehyde studies. He is now president and largest stockholder of Bakelite Corp. He spends about five months of each year in Miami, where he lives in the house formerly owned by William Jennings Bryan. There he is frequently disturbed by unscientific pilgrims to whom he is only the present occupant of the Commoner's shrine.



Keystone

Alloy Steels Mr. Frederick M. Becket

TO Frederick M. Becket, vice president of Union Carbide Co., the alloy-steel industry owes much of its present flourishing condition. Tungsten, chromium, and other steel-alloys, although by no means unknown before Mr. Becket's time, had been usually produced by reducing their ores with aluminum. Although aluminum produced satisfactory ferro-alloys, the price of aluminum made the production costly. It was Mr. Becket who found that silicon, cheap and available in large quantities, could be substituted for aluminum, and that the steel-alloys could thus be much more economically extracted from their oxides and sulphides.

Familiar steel-alloys are tungsten steels, in high-speed cutting tools; vanadium steels, resistant to shock and vibration and therefore adapted to use in auto and airplane engines; and molybdenum steels, used, during the War, in Liberty motors and in baby tanks. Chromium steels, used in armor plate and in projectiles, are currently most discussed as "stainless steel" and "rustless iron," in which employment their outstanding advantage is resistance to corrosion. Prominent among noncorrosive steels manufactured in this country is Nirosta, made by some thirty U. S. Steel companies by license agreement under Krupp patents. Stainless steel has already been popularized in cutlery; rustless iron (with a lower carbon content) is even more resistant to rust. During the War, at the request of the government, Mr. Becket perfected zirconium steels, used in the construction of light armor plate. Mr. Becket was born in Montreal in 1875, graduated from McGill University, got his first job with the Westinghouse Electric & Manufacturing Company. He was the first American to make ferrovanadium on a commercial scale, and participated in the manufacture of early vanadium and zirconium steels. He is president of Union Carbide & Carbon Research Laboratories, Inc., and vice president of Union Carbide Co. and Electro Metallurgical Company.



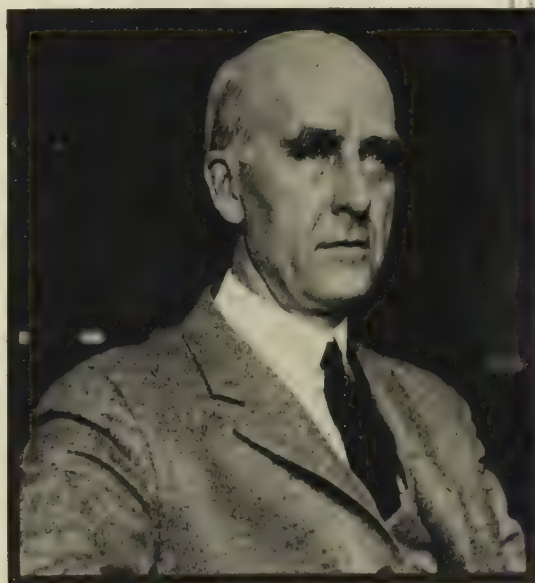
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From Sun to Dirigible Dr. Richard Bishop Moore

CHEMISTS who work with helium and the radioactive group of elements to which it belongs are still close to the earliest experimental developments in their field. In 1868 helium, then not known on earth, was detected in the spectrum of the sun. In 1894 Sir William Ramsay made the terrestrial discovery. And from Dr. Richard Bishop Moore, now science dean at Purdue University and at one time a student and coworker with Sir William, comes much of the world's knowledge of helium today. Although helium's lightness (comparable to hydrogen) and freedom from inflammability at once recommended it for use in lighter-than-air craft, it was not until the World War that the demand for helium became acute. In 1914 a German zeppelin, pierced by incendiary bullets, failed to blow up in the customary manner and demonstrated that the helium-filled dirigible, compared to the dirigible using hydrogen gas, was like an ironclad against a wooden ship.

Since natural gas is the most obvious source of helium in large quantities (nearly 2 per cent of some natural gas is made up of helium), the British Government put into operation two



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helium plants in Canadian gas fields. Here, under the direction of Sir William Ramsay, helium was prepared from natural gas, thus affording one of the comparatively few instances in which the discovery of an element and its practical employment are credited to the same man. Natural gas fields in the United States,

however, were more extensive and richer in helium. In 1918 Dr. Moore took charge of helium extraction plants at Fort Worth and Petrolia, Texas, and by the signing of the Armistice there was on hand some 147,000 cubic feet of the hitherto rare gas. Before the War, helium cost \$1,200 per cubic foot. Its present cost per cubic foot is about three and one-half cents.

The process of extracting helium from natural gas depends upon the fact that the other constituents of natural gas liquefy before helium. At 300 degrees below zero, for example, the other gases are liquid, and helium, still in gaseous form, is readily separated from them. In addition to his work with helium, Dr. Moore has also popularized the use of mesothorium, from which is made the luminous paint on watch dials and airplane instruments. Dr. Moore showed that mesothorium could be used in industry as a substitute for radium, which would therefore be conserved for medicine. Born in Cincinnati, Ohio, the son of a minister of the Christian Church, Dr. Moore was educated in England and France. In 1886 he entered University College, now part of London University, and there, under the great Sir William, began his studies in the field in which he is an international authority today.



PORTRAIT OF ALBERT HENRY WIGGIN—BY CARL LINK

Biggest Banker

Portrait of Wiggin of the Chase.

MR. ALBERT HENRY WIGGIN is a gentleman with an inexpressive countenance who prefers poker. There are other descriptions. He is a rich man with a wife, two daughters, and a number of etchings. He is a Bostonian (or thereabouts) who lives in New York; Greenwich, Connecticut; and Yeaman's Hall, South Carolina. He is tall, stout, and sixty-two. He is the banker with a million friends. He is Al to more people in Wall Street than anyone else in Wall Street is Al to—or Bill to, or Jack to, or George. He is the country boy who made good, and the minister's son who made millions, and the self-made man. He is the golfer who wins from a three down and four position. He is the newspaper reader who can read all the morning papers in New York from weather to want-ads (or from girl-gunman picture to girl-gunman picture) in practically no time at all. (And does.) He is Mr. Seward Prosser's idea of a "big, jovial, wholesome boy." And he is also the chairman of the governing board of the largest bank in the world.

But chiefly he is the gentleman with the extremely inexpressive countenance who prefers poker. Poker is by all odds the greatest American contribution to the technique of living. It is only a gambler's art to gamblers. Most Americans play it for the game, not for the money. Mr. Wiggin plays it for the competition; he loves to win. And competition comes as naturally to him as to a schoolboy out for the football team. He is a very energetic, healthy, courageous, insensitive, intelligent man. He believes in himself. And it gives him pleasure to excel.

Consequently, and given his very considerable advantages, he has excelled with ease. From the time, thirty years ago, when he left Boston and the raw coffee-roasting smells of State Street and the northeast fogs, he has been a figure in New York. He has had his misfortunes. He does not always choose men well, and some he has chosen very badly. But for the most part he has gotten on. He has pushed the Chase National from assets of \$4,000,000 and deposits of \$52,800,000 in 1904 to its present position as the world's largest bank, with total resources of \$2,800,000,000, and himself from vice president to heights so remote from ordinary bank officialdom that, like newly discovered mountains, they have been given a new name. The growth of the bank has been largely accomplished by the absorption of other banks and his own eminence in Wall Street by the displacement of other men. And the result is a matter of satisfaction to all concerned. Even to the displaced executives. For Mr. Wiggin combines, with a rather well-cooked firmness of purpose, a kind of tact which makes the very objects of that purpose like it. During the panic of 1907 he is said to have handled older and richer men so skillfully that few of them were aware of the fact they had been touched, so skillfully indeed that the elder J. P. Morgan, who in that great crisis relied almost exclusively upon the elder J. P. Morgan, and occasionally upon the young Mr. Henry Pomeroy Davison, began to rely on Albert Henry Wiggin as well.

But Mr. Wiggin's most brilliant successes are much more recent than the year 1907. In October, 1929, operations upon

the New York Stock Exchange, as the newspapers have had occasion to remark, were somewhat irregular. Gentlemen with large commitments were anxious to secure loans from their bankers, and bankers were not always able to satisfy the wishes of their clients. Confidence, in the phrase much used at the time, was impaired, and it began to look as though almost anything might happen. There were bankers in the consortium formed to support the market who were even inclined to close the Stock Exchange and go home to bed. But not Mr. Wiggin. Mr. Wiggin was not then the chairman of the governing board of the largest bank in the world. He was merely the chairman of the board of directors of the second largest bank in America. But the situation was made to order for him. What was required was an inexpressive face and the appearance of unlimited confidence backed by the appearance of unlimited funds. All of which Mr. Wiggin had. Whether he actually had either the limitless confidence or the limitless funds, it would not be Hoyle to ask—though it is known that the Chase was then in a remarkably mobile, lean, and strong condition. He refused to hear of the closing of the Exchange. He let it be said up and down the Street that Chase had money to lend. And he stood by his clients with a loyalty and a courage which are not so common in business as altogether to escape notice when they do appear. The result was that he emerged at the end of 1929 with an enhanced personal reputation, a strengthened bank, and various other appurtenances of victory, including the shoes of Mr. Charles E. Mitchell. Which last he has worn ever since with both dignity and grace.

A story told in the Street at the time indicates that Mr. Wiggin is as adept in the more finished maneuvers of the American game as in the more obvious ones. Toward the worst of the slump he was called on the telephone by a gentleman well known in financial circles, whose banking business it would ordinarily be most interesting to have, and was asked for a credit of almost impossible proportions. This gentleman had already, as Mr. Wiggin surmised, called upon a number of other banks and been refused. And Mr. Wiggin had a presentiment—what is known elsewhere as a hunch. It occurred to him that the inquiry might be meant rather to sound out the waters than to produce immediate results. And, acting upon that presentiment, he blandly acquiesced. The credit thus established was never used.

With a highly exciting and highly competitive profession, it is not surprising that Mr. Wiggin has little time for anything else. He is no more interested in politics or public affairs than most successful men of business, which is to say that he has opinions only on such problems as touch himself. He has never concerned himself greatly with the art of spending money, and neither his houses nor their contents are famous. His real interest outside his business is his friends. Some ten years ago Mr. Wiggin observed in a magazine interview: "Friends don't make a man, but if a man has the right qualities, the right personality, the right caliber, he cannot help making friends; they just feel drawn to him." Mr. Wiggin seems to have those qualities. They just feel drawn.

Cloak & Suit

The country's fourth largest industry is at the mercy of two forces—labor and a woman's vanity. Together, they keep it without leadership and without stability.

THE garment trade of the United States, the fourth largest industry in value of products, is no dinosaur. Rather it is a protozoan colony. To become a manufacturer in any of the three industries which exceed the garment trade in size requires enormous capital. No Gary or Schwab, no Swift or Armour, no Ford or du Pont or Sloan could hope to operate with a financial reserve that can be written in four figures. But one may become a full-fledged garment manufacturer with \$5,000. And many do so. Hence it is that the workers in the garment trades (341,200 as compared to steel's 361,300) are scattered throughout thousands of establishments. And hence again, the picture it presents is not the portrait of a business giant but a mass picture of thousands. A picture, indeed, of a race. And its story is the story of that transplanted people.

It is a story of needles and tired eyes. Of street brawls. Of suave salesmen. Of sneak thievery. Of the parallel development of the automobile and the motion picture. Of the oppression of the Jews in Russia in the year 1882. Of Hattie Carnegie's and Sacks' and Klein's. Of the new architecture.

Of the sweatshop. Of E. W. Fairchild, the gentile king of American Jewry. Of Benjamin Schlesinger, the gaunt and snarling wolf who is president of the International Ladies' Garment Workers' Union. Of A. E. Lefcourt, who has altered a considerable portion of Manhattan's sky line. Of Jack Amsterdam who . . .

Well, take Jack Amsterdam, for example. He is one of the big shots—Amsterdam, Inc., 498 Seventh Avenue, Manhattan. His winter line is about \$150 and up, his summer line about \$79.50 and up. Gowns from his factory are draped on models in the very best stores in the country. He is a hard worker, and has great enthusiasm. But his wife, some say, is more than half the brains of the business, and she is very attractive. A decade ago, or a little more, runs a story well-known in the trade, he was nearly broke. He had borrowed and borrowed until the patience of his creditors was exhausted. They were preparing to descend upon him when the time came to buy spring models. He must have a Line to show the trade and it must be a good Line. He must have it and sell it to get money for the creditors. He must buy models in Paris at



Photographs by Margaret Bourke-White

hundreds of dollars each—with no money. So he took his wife to Paris, to one of the most expensive suites at Claridge's. In Paris was a friend, a wholesale jeweler from whom he borrowed pearls, diamonds, emeralds to hang upon his wife. American creditors and the Paris *haute couture* were breathless, hesitated to mention the money he owed them. When any did, he grew annoyed at the interruption of more important business by insignificant matters which could just as well be put off until his return to America. "Some other time when I am not so busy," he would say. And he would add, "Come up to our suite at Claridge's and have a drink. I want you to meet Mrs. Amsterdam." Thus he got the models and his Line—and sold it and got enough money to pay the creditors. Which is the way the story should end. But Amsterdam required a dramatic *dénouement*. So he invited the wolf pack to dinner. And there to each he paid his due while he told them collectively how he had financed himself on their money.

There is Henry H. Finder. He is magnificent in a strike. He is a German Jew as once were all in the garment trade. He has a hot head, and in it one good eye. The other is generally supposed to have been damaged in a fight. He makes good clothes and plays good golf. He drives a Lincoln which was given to him by his associates in the strike of the year 1926. (The Lincoln is the garment trade equivalent of the D. S. C.) At one time he was head of the Industrial Council and ruled the cloak and suit trades like a czar.

Leo Del Monte (Del Monte-Hickey) is about five feet six. He looks like a movie villain and is known throughout the trade as "the man with the iron mustache."

One can penetrate to the offices of Benjamin Schlesinger, the president of the powerful International, and he will talk—if he wants to. His black eyes scan the visitor quickly but turn

away again as he talks. His hands move nervously. Now and again they tug at his shock of black curls. His face is thin and swarthy, almost handsome. He is a bitter man, passionate in his devotion to his cause, supremely vain in his identification of his cause with himself. He has been compared to a wild animal who has fought his way through the pack to his prey and stands over it snarling, sure that the pack is waiting to steal it from him if they can, to fight if they must. He is wary, defiant of them. The prey is his power; the pack is the world. (The power that now is his, for the second time, was wrested from Morris Sigman by the Communists in 1926.) He is not an old man, but he lives in fear of death. For he is said to be ill of a strange and rare malady. Schlesinger would scorn a familiar ailment, would refuse to die of pneumonia.

William Bloom has a coat of arms, the only coat of arms in the trade. He is a smart, handsome man and takes great pride in his clothes. People frequently stop to look at him as he walks down the street, so faultless is his attire. Everyone in the business likes him and admires rather than envies his success. He belongs to the new school. His name is associated with sport clothes. But the names of some of his companies, Beaucraft, Germaine-Monteil, etc., are associated with all branches of the garment industry. He makes furnishings for men as well. A lounging robe for big Bill Edwards was made in a William Bloom establishment not long ago. The tailor who was to take his measure approached him. "You'll need more than one of those," Edwards said, pointing to the tape measure. The tailor laughed, but did not believe. He found that Edwards was right—the sixty-inch tape would not meet around the gargantuan midriff.

Jacob Sperber is rumored to be about to retire any day and live on the money he has made in cloaks and suits. He is, in





HE CUTS THE GARMENT . . .



. . . FROM THESE . . .



. . . SHE PRESSES IT WHEN FINISHED

other words, about to join the more select company of ex-garment makers—the Knopfs (publishers), Abraham Lefcourt (real estate), Saul Singer (vice president, Bank of United States), William Fox (ex-movie czar). Already he is partly withdrawn from garments, devoting much of his energy to real estate and charity. He makes generous contributions to the Boy Scouts and to the Jewish Federation. But he is still busy making cloaks and suits—and playing pinochle, which is one of the characteristics of the trade.

George Jablow plays pinochle, too. He was a cutter and is now owner (with Samuel Epstein) of Aaron Goldstein & Company, one of the most successful cloak and suit houses and one of the foremost sponsors of the Separate Summer Season for women's clothes. He knows that life is a joke, but he is level-headed and not easily excited. People seek his advice.

Hundreds of others are encountered in a search for the Gary, the Ford of the garment trade.

There is David Dubinsky, who was sentenced to a Siberian prison camp when he was seventeen. He finally escaped to America and got a job in a garment factory. At thirty he became manager of Local 10, a cutter's union and one of the most powerful locals in the country. He is "the baby of the Unions" and after eight years is now secretary-treasurer of the parent union of Local 10, the International Ladies' Garment Workers' Union.

The farther you look, the more you will find. More and more labor heroes, more and more owners of small plants. For the largest plants in the industry are small. All of them doing the same thing in the same way. And all different. And all revolving about one sun, the gentile king of a Jewish industry who is not the dominant figure in the industry because, queerly enough, he is not in it.

His importance in the trade is not self-assumed, as much garment trade importance is. It was the *Jewish Daily Forward* who called E. W. Fairchild, a fifty-five-year-old gentile, king of the Jews. From his offices on Thirteenth Street, far from the Garment Center, he quite literally directs the activities of the entire garment trade. His two most important publications, *Women's Wear Daily* and the *Daily News Record*, are read by

everyone connected with either manufacture or sale of garments, everyone who can read English. His news service, exceeded in the size of its staff by only four of the great news-gathering agencies of the world (Associated Press, United Press, Reuters, and International), forewarns the trade of style changes and announces all fabric, color, and style developments. In Paris his representatives are accorded advance showings by the Parisian couture so that complete reports may be carried in his publications on the day of the openings. From four seats in the gallery of Congress, legislation affecting the trade is reported. In five other periodicals, published in New York, Chicago, Paris, and London and in many series of analyses and charts he provides all the knowledge and forecasts that the trade requires. He, as much as any man, may be called the Will Hays, the Kennesaw Mountain Landis of the garment industry. Yet he is not the industry. Nor are Sperber, Bloom, Schlesinger. The industry is more truly a half million simultaneously flying needles and a million tired eyes. The basic week of five eight-hour days has done much to save the eyes, but eight hours of staring at a flashing needle and a trail of stitches is not the use for which the human eye was designed.

Hands and horses

In the three larger industries, the workers are better paid. (Garment workers average \$24.51 a week. Workers in stockyards and slaughterhouses, \$26.09, in steel mills, \$32, in automobile factories, \$32.91.) And though many of them do not have the eight-hour day and most of them do not have the five-day week they do have power-driven machines which lift and carry the greatest burdens. If each horsepower unit could be replaced by a living horse, the comparison would be graphic. Each wage-earner in slaughtering, steel, and motors would have nine horses to help him, but in the garment trades four men would have to share one horse. In terms of production, 739 horses are required to haul in a million dollars of products in the three larger industries, but only twenty-nine are required in the garment trade. Although the United States Department of Commerce reports that in its list of



fifty-seven only three industries exceed the garment trade in value of products, forty-two are shown to consume more power.

Manhattan, greatest of markets

But this is not because the typical garment factory is located beyond the sound of humming dynamos. On the contrary. Of the 341,200 workers in the industry, 94,848 work in Manhattan, which means that every seventeenth person you pass on the street in that crowded borough is a garment worker. But this curious trade is even more concentrated in its locale than this preliminary step indicates. For these 94,848 persons with very few exceptions work within the district bounded on the east by Seventh Avenue, on the north by Times Square, on the south by Pennsylvania Station and on the west by Ninth Avenue (although the western frontier is changing, creeping slowly but steadily toward the bank of the Hudson). Wherefore, these people may all be found during any working day, herded together in an area of about 150 acres, 632 of them to each acre. And because upon these same acres also stand many such architectural giants as the New Yorker Hotel

DAY LONG, AND IN BUSY SEASONS UNTIL LATE AT NIGHT, FINISHERS ASSEMBLE THE PIECES OF GARMENTS WHICH HAVE COME TO THEM FROM THE CUTTING TABLE. FINE GARMENTS REQUIRE HAND WORK (AS ABOVE AT GERMAINE-MONTEIL). WHEN FINISHED . . .

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PUBLIC
LIB.



. . . THEY GO TO AWAIT THE ARRIVAL OF BUYER OR JOBBER ON ONE OF THE TENS OF THOUSANDS OF GASPIPE RACKS. CHILDREN'S DRESSES (AS ABOVE), SUITS, CLOAKS, DRESSES OF HIGH AND LOW COUTURE, A HUNDRED MILLION A YEAR

and hundreds of warehouses, restaurants, banks, etc., the 94,000 garment workers must be piled one on top of another. They are piled fifteen to thirty layers deep in skyscrapers that have been built on garment-earned money by Abe Lefcourt, Saul Singer, Mack Kanner and others. In this Garment Center one may see more closely concentrated than anywhere else, New York's new architecture. The setback building line, the high flung balcony and parapet frame the streets. Thousands of windows flash in Manhattan's adulterated sunlight. And behind each window are banks of spools, long cutting tables, long ranks of sewing machines, ornate showrooms, narrow shoulders and unshaven faces bending over films of fabric.

In Thirty-sixth Street they congregate at noon. They seem to be the ultimate in the thug, the shenango, the rogue's gallery type. They shout and gesticulate, bargaining with prospective employers in an informal employment market. Some lean against barber poles or carved cornices, reading Yiddish newspapers, munching sandwiches and dill pickles. The women workers mostly stay indoors. Many of them are middle-aged, sallow. Their bodies are tired, maternal. Fingers, used to dodging the flying needle and to plucking fringe, are never still. They continue to play with scraps of cloth, plucking, folding, fraying. Predominantly Russian Jewish are the crowds in the street and in the shops. But in recent years the number of Italians and negroes in the trade is constantly growing.

From New York's 94,000 come \$1,439,213,761 worth of the industry's \$2,573,900,000 total. Brooklyn's 17,380 workers add \$58,831,922 to this figure. About 60 per cent of the clothes made in the United States.

The reason is implicit in the clothing business. Not only because the wealthiest retail market surrounds the Garment Center, but because it is to New York and to the Garment Center itself that all buyers go to order their stock. Jobbers want overnight deliveries. The garment factory across the street or upstairs gets the job.

This wealthiest market, so far as clothes are concerned, is upper Fifth Avenue and its tributaries. Within it lie Bergdorf Goodman, Hattie Carnegie, Saks-Fifth Avenue, and many another swanky shop. Most of them are retailers, buying part of their stock on

Ninth Avenue and part of it on the Rue de la Paix. Hattie Carnegie, however, has her own garment factory. She operates one of the trade's swellest inside shops. In her plum-colored stucco building on Forty-ninth Street the visitor trips over the feet of the smartest and proudest of New York's smart and proud.

The biggest market, the market in which clothes move fastest, is a subway ride away, at Union Square. There S. Klein, in a confederation of characterless buildings, has built up a business of amazing proportions. His turnover is sixty times a year. Dresses may be bought for one dollar up. They hang upon gaspipe racks, literally in thousands. The customer messes and mauls until she finds what she wants. Enthroned at the end of each aisle, a guard with half-open eyes watches for shoplifters. Dresses may be tried on in a room which might be the locker room of a proletarian country club, so crowded, so informal is it. A \$24,000,000 business was done by Klein in 1929. He will exceed \$28,000,000 in 1930.

Others have followed Klein and thrive all about him. Ohrbach's is diagonally across the corner, and is probably second to Klein's in size. Hearn's, the hundred-year-old department store on Fourteenth Street and Fifth Avenue, two blocks away, is first cousin to Klein's in its dress departments. Their windows, one day this spring, showed smart, simple frocks: "Three Dresses for Six Dollars." These differed from those sold at the other end of the Avenue in the quality of the material, the depth of the hem, the finish of the work. There was nothing the matter with the style. For style is nobody's property. One man may buy and pay for it. It remains his until he puts it in his window.

From cloak to dress

There is, of course, a reason why this industry is so helter-skelter, why it dazzles its spectator and leaves him breathless. The reason is Milady, the American woman, and her accomplices are Conde Nast, the movie makers, and the makers of automobiles.

To understand present conditions, one needs to trace the industry back to its nativity, which means that first of all one must forget the existence of gowns and dresses and remember their predecessors, the cloaks and suits.

In the 1840's cloaks and suits were not, commercially.



BEHIND EACH OF THESE WINDOWS IN MANHATTAN'S GARMENT DISTRICT, ROW UPON ROW OF GARMENT WORKERS

That was the day of piece goods buying (even of weaving in many quarters) and home sewing. The only women's garments bought in stores in any quantity were shawls and jackets. These were imported from Germany and sold largely by Germans and German Jews. Many of these retailers had custom tailors in the back rooms or upper floors of their stores who made apparel occasionally for the wealthy trade. This was the condition that had existed since pre-Revolutionary days and held the well-formed embryo of the industry which has developed, even to the importation of fashions from Paris. (But importations in those days were in miniature on dolls. They were known as "babies.")

In 1846 the first clumsy sewing machine was made.

Immediately, with its aid, the larger stores, which had been the most extensive importers of jackets and shawls, decided to make their own garments instead of importing them. By 1860 the industry had become of sufficient importance to appear in the census (188 establishments, 5,739 workers, \$7,181,039 worth of products). Coincidentally, the vogue of kerchiefs and shawls had died, and the cloak and mantilla came in—and the hoop skirt, which was a nuisance to make at home. Wests, Bradley and Carey's Hoop Skirt Works on West Twentieth Street, New York, converted "steel rods into finished skirts" and the "steel for the rods was imported from the famed works of Krupp, Germany." Here were employed as many as 1,600 hands, about 30 per cent of the employees in the entire industry, and certainly the closest approach that there has ever been to a General Motors in the clothing trade.

During the ensuing twenty years the new industry grew rapidly, attracting more and more men from retailing. Paramount among them was the still remembered Meyer Jonasson. He forsook retailing for manufacture in 1874 and dominated his new field. The Gotham cutting knife was developed, and women were extensively replaced by men among the employees. (The number of women in the trade increased from 22,253 in 1860 to 25,913 in 1880; the number of men from 2,594 to 12,963.) Most important in this period, however, was the effect of the conditions in Russia in 1882, which drove Russian Jews to America in tens of thousands. Since the birth of the industry, the German, Hungarian, and Austrian Jew had been dominant in both the manufacturing and retailing fields. In the eighties new thousands of Jewish immigrants were job hunting, particularly in New York, then as now the country's garment capital. Many of them were facile tailors. All of them were stoical, dogged workers thankful to have escaped from Russia with their lives, willing to work at the rates of pay then current (about 25 cents per garment, which made it possible for them to earn from \$1.50 to \$10 a week, with the majority earning about \$3.00). This was the period in which the sweatshop was born and strikes and protests against workers' conditions were continuous.

In this era also, and in the two decades that followed, nationally known Lines were possible. Meyer Jonasson, for example, was a household name both inside and outside the trade though to his fame as a manufacturer that which he had acquired as retailer added much. While Milady pro



THE "PLAY STREET" OF MANHATTAN'S GARMENT DISTRICT (THIRTY-SIXTH STREET, BETWEEN EIGHTH AND NINTH AVENUES), CLOSED TO TRAFFIC AT NOON, CROWDED WITH JABBERING, GESTICULATING MEN

gressed from hoop skirt to Second Empire to bustle to straight front to leg o'mutton sleeve to wasp waist, trade names and large establishments thrived. Whether or not a manufacturer's line was what is now known as a "wow" made little difference. Dead stock in New York, Pittsburgh, Cleveland, and Chicago sold out quickly in Poughkeepsie, Beaver, Youngstown, and Peoria. Garment makers thrived. Though the New York Tenement House Law had curbed home work upon garments and to a considerable extent stamped out sweatshops of the worst type, dark and unsanitary lofts so crowded that workers could scarcely move from their chairs were still common to the industry. Ready-to-wear garments were still chiefly of the heavier materials. The dress business, now busiest of all, was still unborn. Men had become the vast majority of the employees. The Union, the International Ladies' Garment Workers' Union, was organized but was not yet powerful. And ladies' dresses for the most part were still made at home. This was twenty years ago when the neighborhood dressmaker was in her heyday. There were, by 1909, 4,558 establishments, 153,743 workers in the trade; their products were valued at \$384,752,000. Then the industry was huge and hectic, but today's bewildering state had not yet developed. Last year the industry could count 7,588 establishments, 154,459 workers, producing women's garments to the value of \$1,500,000,000. Four major phenomena rushed this evolution from unity to hopeless multiplicity:

First.—The closed motor car and the closed (centrally heated) house have made lighter fabrics for women's clothes practical because comfortable. Thereby the suit, as it was once known, is languishing. Instead Milady has an ensemble made of anything from a light weight woolen to lace. Because all women have many dresses and because the neighborhood dressmaker is now almost as rare as the dodo, the dress busi-

ness, natural child of the shirt waist business, which was born in the nineties, is now most important.

Second.—The movies now show the housewife, debutante, and parlor maid in Poughkeepsie, Beaver, Youngstown, and Peoria just what Milady is wearing in New York, Pittsburgh, Cleveland, and Chicago. Conde Nast's *Vogue* and many another fashion periodical circulate in quantities never before heard of. The motor takes Milady everywhere. No longer is any line salable anywhere unless it is a "wow."

Third.—During the War and after it, the manufacturer found it profitable to buy large quantities of raw material and manufacture his garments in advance because the cost of both labor and materials was constantly and steeply rising. At the same time, retailers were cautious in placing orders, fearing a break in prices. The consequence of this was the inauguration of buying by the retailer of garments from the manufacturer's stock. Many manufacturers promptly ceased to be manufacturers and became jobbers, eliminating even their cutting departments, buying the garments ready-made from sub-manufacturers. These sub-manufacturing or contract shops multiplied rapidly. Each jobber needed to have access to sufficient number of them to make possible overnight filling of orders. Thus the large manufacturer, for the most part, is no more. In his place are hundreds of jobbers with swanky showrooms and (because so little capital is required) thousands of contractors, each with rented sewing machines and scores of cutters and operators working like mad for a few weeks spring and fall, furtively dodging starvation in the weeks between seasons.

This is a condition to induce "sweating," and sweating exists in the industry still, though conditions now sufficient to brand a plant as a sweatshop would have been welcomed as a great relief at the turn of the century. But the present



ALEXANDER ARCHIPENKO HAS MADE THE DUMMY A THING OF BEAUTY AND A JOY FOREVER FOR SAKS-FIFTH AVENUE (LEFT). BUT, THOUGH THE NUBIAN CERAMIC MAY ENHANCE THE BEAUTY OF THE FINISHED GOWN, IT WOULD SERVE NO USEFUL PURPOSE IN THE GARMENT FACTORY. NOTHING HAS YET THREATENED THE SECURITY OF THE OLD-FASHIONED DUMMY IN HER OWN FIELD. UPON HER SHOULDERS ARE DRAPED FOR FITTING AND INSPECTION THE SWANKIEST AS WELL AS THE CHEAPEST OF CLOAKS, SUITS, AND DRESSES. (RIGHT) EACH GARMENT AT AARON GOLDSTEIN'S MUST PASS RIGID INSPECTION



conditions are not meekly endured. Only last month vigilant, passionate Mr. Schlesinger denounced Baltimore as the "mecca of the sweatshop system," charging that young girls were being paid only \$6.00 for a sixty-hour week. Effort to improve working conditions is expended constantly and with increasing success.

Fourth.—Paris. As long ago as the American Revolution, the "babies" above referred to were imported and copied. Before 1776 these came mainly from London, but during the Revolution none but Tories would ape the British, and French "babies" began to be shown. Importation of the gowns themselves had become important by 1827, as reference to newspaper advertisements of the day will show. In Boston in that year a merchant advertised "a complete assortment of new and fashionable goods . . . Rich ball dresses, Lace dresses, Embroidered French Cambric and sheer muslin dresses, Mantles . . . a few splendid French embroidered Muslin and Cambric Dresses worth from 35 to 55 dollars. These being lately imported, are the most modern style and truly elegant."

Today hundreds of buyers, virtually all manufacturers (a few important manufacturers still exist, such as William Bloom, Aaron Goldstein, A. Beller, and are now known as "inside shops," by virtue of the fact that the work is all performed in the plant itself), and many, many jobbers go to Paris for the openings each season. Each man brings back with him models, for which he has paid \$300 or more. This model no American woman would wear. Nor would any French woman. It is to the purchaser what shorthand notes are to a stenographer. It may be made from any kind of material, the cheaper the better. If the original had fur anywhere upon it, the model will indicate it with white muslin or sleazy crepe. Each model is a trade secret for its owner. He hides it carefully. When he is home again, his designer will *adapt* it, rarely *copy* it. The inexperienced eye is often unable to detect any similarity between the model and the copy. But no matter. The dress qualifies as a Lanvin or a Patou or a Worth because the American designer (drawing, likely, \$10,000 to \$25,000 a year in salary) had a twist and fold of cloth for which his boss paid \$500 hanging in front of him as he worked. The similarity may not extend beyond the general arrangement of buttons or the flare of a cuff.

The birth of a "copy" is attended with great secrecy. The manufacturer or the jobber knows that if his new number is particularly "hot," it will be recopied (actually copied this time) and on the market at \$10 less than his price in a few days. The theft, manufacture, and retail sale of a style idea has been accomplished in three hours.

Thus copy must follow copy in rapid succession. Thus manufacturers figure the life of a style to be two weeks. And thus, with competition so keen, a bad guess, a Line that is a "flop" may readily ruin a house which must always have most of its eggs in one basket, though it has a new basket every fortnight.

Wherefore, today's hodgepodge.

Wherefore, the saying that every garment man goes eventually into real estate. As soon as he has made enough money, he does it. As soon as he goes bankrupt, he does it. If he has any time while he is still in the garment business, he turns to the hectic real estate game for peace, quiet, and relaxation. Real estate or pinochle, or Wall Street or the theatre racket.

The industry looks ahead

In Union headquarters, at gatherings of employers' associations, and where two or three social economists are gathered together, heads are wagged today about the future of

this berserk industry. With its roots in the Garden of Eden ("When Adam delved and Eve span, who was then the gentleman?"), the garment tree has suddenly become a banyan, an exceedingly tangled banyan that persistently defies pruning and cultivation. And nobody nowadays wants a banyan.

Communist leaders, during the brief era in which they dominated garment labor, declared that they had a cure-all up their sleeves. The cure-all was implicit in the theories of Communism. When the Colonel's lady and Judy O'Grady are both wearing clothes of the same material and cut, when the foibles of style are no more, then it will be possible to develop a Dunderbeck machine into one end of which sheep and cotton plants are fed, from the other end of which will issue lamb chops, cottonseed oil, and the uniforms of the *Internationale*. In a proletarian and utilitarian Utopia the woes of the garment trade will vanish.

All others seem convinced, however, that not even social revolution will stamp out Milady's vanity and her deep need for novelty. The idea of practical adaptation to the apparel field of the principle of mass production is fantastic while she persists in feeling that a dress is worthless once she has seen its duplicate, and while production of new fabrics and designs



HERE, WORKING WITH LACES AND LIGHTWEIGHT FABRICS, WOMEN HOLD THEIR OWN IN THE INDUSTRY

continues at its present dizzying speed. These two influences, exerting pressure fore and aft, have the industry at their mercy.

Concurrently, a constant restriction is laid upon prices and wages by the mere fact that nearly any woman can make her own clothes. The fact that in this decade few of them do make them is only true because the potential economy of home dressmaking is outweighed by the convenience of buying ready-made garments at current prices.

The conditions of labor have been much improved by steady battling. Strike, lockout, and injunction have been utilized again and again. The International Ladies' Garment Workers' Union is perhaps the most effective labor organization in the country, and it enjoys the full confidence of the employers. The strike of last January and February was all thrashed out beforehand, even to the details of duration and settlement. The employers were glad of the cooperation of the Union in driving out cheap competitors. The stake for them was as great as the stake for labor. The riots which attended the strike came to a climax in the death of Jacob Rothenberg, an open shop manufacturer, after an assault in which his skull was fractured. Friends of Rothenberg insist that he was the victim of plan and not of circumstance, but nothing more than the general accusation has ever been made publicly. Official Labor regrets the incident. Somewhere their plans for a peaceful strike ran amok. However, disturbances were con-

fined to the garment district, and few outsiders knew of them except as they were reported in the newspapers. The strike was settled to the satisfaction of both parties. No more will employers who belong to the Industrial Council of Cloak, Suit, and Skirt Manufacturers, the Merchants' Ladies Garment Association, and the American Cloak and Suit Manufacturers' Association purchase work from contractors who do not conduct Union shops; Labor has been given a forty-hour, five-day week and week work only, definite minimum rates of pay, obligatory overtime pay, legal holidays, sanitary standards. The strike was financed by a bond issue floated last year. The principal in drawing up this agreement was Raymond V. Ingersoll, impartial chairman of the Cloak, Suit, and Skirt Industries, whose reputation as a successful mediator in many a dispute has gone far beyond the trade.

The money is being collected today for the next two strikes on the program. Probably the Union heads already know the terms of settlement. The Union will fight until it wins. It is used to fighting, and likes it. For it is fighting for a cause. In 1924 a Communist faction seized control of the International. The Right Wing, to which Benjamin Schlesinger belongs, fought for two years to regain it, sold its bank, went \$2,000,000 into debt, and won. Today, the Union is larger and stronger than ever before. It dominates the industry. It holds the future of the industry in its hands—except for Milady.

This is Labor's day. Labor's and Milady's. The employer in the garment trades must meet the demands of both, and the future holds promise of a continuation of the same conditions, so long as these two are in the saddle. Which must, it seems, be always. Milady will continue to make her imperious demands. Labor will continue to make its own. The women's garment industry will remain: Eight thousand small manufacturers. A hundred million garments a year. Two-thirds of the Russian Jewish population of the United States (in retail and wholesale branches). Needles and tired eyes.

A Note on Men's Clothing

Conditions in the men's branches of the clothing trade have followed a course more nearly parallel to that of other industries. The "gent's tailor" frequently continues to enlarge his shop, hoping to become in time a Fashion Park, a Hart, Schaffner & Marx, a Kuppenheimer, a Richman Bros. The securities of such firms are listed on the big board, though there is no exchange which lists the securities of women's garment factories.

The manufacture of men's and boys' clothing is not centralized in New York, or even in the East. Rochester, Chicago, Philadelphia, Baltimore, Boston, Cincinnati, Cleveland, St. Louis, and Milwaukee are all important producing points, and, together with New York, provide 83 per cent of all men's clothing. This is a percentage only slightly larger than Manhattan's percentage of the women's trade. The latest available census figures value the men's industry at \$932,182,000 as compared with a \$2,573,900,000 clothing total, a little more than one-third.

In recent years, with the increasing variety of men's clothes, the vogue and the season have come to mean more to the manufacturer. There are those who forecast an approximation of the conditions in the women's trade for the men's trade: the rise of the jobber, sub-manufacturer system, and the correlative decentralization.

Sidney Hillman, head of the Amalgamated Clothing Workers (the men's trade equivalent of the International) has been declared to have the "finest brain in the labor movement." More than 75 per cent of the workers in the men's trade belong to the Amalgamated; there are Amalgamated banks in Chicago and New York which have lent millions of dollars without collateral to union members; the union has financed employers through critical seasons, has built cooperative apartments wherein the rents are \$11 per room per month. The career of labor has been stormy in the men's trade, and the potentialities for trouble and disunion are ever present, but for the moment, conditions are far more stabilized than they are in its sister industry.



ON SUCH A MACHINE ARE FABRICS "PINKED" TO PREVENT FRAYING OF EDGES

THE IMPORTANCE OF PESSIMISM



- A PINCH OF PESSIMISM is necessary to the creation of fine advertising. It is the salt on the egg.

- For your true pessimist will point out opportunities for improvement long after an optimist, in his enthusiasm, has settled back satisfied.

- Many an advertising campaign that was good—

really good—to begin with, has been spurred on to greatness because a note of pessimism has mingled with the cheers.

- In this organization, when both the optimists and the pessimists are enthusiastic about a new campaign, it is then ready to show to the advertiser. But not before.

YOUNG & RUBICAM, INC.

ADVERTISING ■ NEW YORK ■ PHILADELPHIA

Soy Beans

Which may be glue, milk, cheese, sauce, varnish, axle grease, fertilizer, soap, soup, buttons, artificial leather, enamel . . .

RABBITS adore them and striped blister beetles are dangerous to them. The Emperor Shen-nung mentioned them with respect in the *Pen Ts'ao Chin* written by him in 2838 B. C., and they are being mentioned with respect today by such men as Mr. W. J. Morse, Senior Agronomist, Office of Forage Crops and Diseases, Bureau of Plant Industry, U. S. Department of Agriculture. Infinite and confusing are their varieties, and their uses are legion. We speak of the soy bean, important as rice to Japan and China, economic gauge of the province of Manchuria whence issues half the world's production, and in the United States last year grown to a \$70,000,000 harvest. During the War in Germany, it is said, a dinner was served composed entirely of the soy bean in various of its manifestations. It is an ingredient of Heinz and Lea & Perrins' Worcestershire Sauce. You are apt to find its oil in your soap and oleomargarine. Your comb or your buttons may be made from its plastic, satolite. You never order them at the Ritz, and one remembers no U. S. farmer complaining about his soy bean crop to the Senate. Yet roughly the soy bean may be made into almost anything. Without it there would be no agricultural Manchuria, and with no agricultural Manchuria there would be no South Manchuria Railway. It is important, but it is only a bean which does not jump. It is always yellow or brown or black or green.

Now a bean is a bean and you eat it in soup or Boston baked, or if it is a lima bean, with corn and you call it succotash. You might say that edibility is the bean's chief attribute, that the Platonic Idea of Bean is a plate of them, steaming hot. The soy bean, being bean, fulfills these expectations. But unlike other beans, it can be crushed into a sort of flour, and with flour you can make waffles or pancakes. You can even make soy bean milk by grinding in water and straining. And with milk you can make cheese. So in Paris there is

a cheese factory which makes Rocquefort from soy bean curd.

Consider the bean. It will grow almost any place though in northern Manchuria it seems happiest. It is grown in the United States in nearly every state east of the Mississippi. It contains nitrogen, carbohydrates, secretes a valuable oil. Its milk has more proteins than cow milk and little danger of contamination. Its flour contains four and one-half times more fat, four times more proteins, half as much water, and nearly half as many carbohydrates as the flour of wheat. These chemical ingredients make it a food, more interesting, perhaps, than palatable. Though the milk is supposed to be good for one (it arrests cases of retrogression, causes normal growth), it has generally to be drunk sweetened with sugar. Soy bean sauces are better spiced. (For the Chinese taste Lea & Perrins' Worcestershire is too hot. The Chinese themselves make their sauces by exposing the crushed bean to sunlight and actually melting it. Certain Korean sauces are thus matured thirty years before they are considered palatable.) But if the bean's chemical make-up only indirectly contributes to its success as human food, it is nevertheless the basis of the bean's industrial importance. Because of its nitrogen, the bean is valuable as fertilizer and also as poultry and stock feed. And the bean's hereinbefore mentioned oil has proved of value to many a manufacturer of paints, enamels, lacquers, and even explosives.

Oil and cake

First step in the industrialization of the bean is the extraction of oil. Still today in China does the traveler see crude stone presses which roughly extract about half the bean's total oil content. The Anglo-Chinese Company at Harbin, however, and the Suzuki Mill at Dairen, which use chemical extraction, have now achieved a production tantamount to



William Thompson

IN MANCHURIA, COVERING SOWED BEANS WITH EARTH



Ewing Galloway

IN KICKAPOO, ILLINOIS, RAKING SOY BEAN HAY

Sunset is the Burglars' Sunrise!



SUNSET is the burglars' sunrise! Your night—their day! They work while you play or sleep! They laugh at locksmiths! They rob where they please—and take what they please! The fact that you've never had a loss, or that you feel you live in a safe neighborhood, is no assurance that your turn may not be next.

An **Ætna** Residence Burglary Policy not only reimburses you for any and all articles stolen from your home but pays the bill for any

damage done to your premises or property by those who come to steal.

Now is the "open season" for burglars! **Now** is the time to get in touch with the **Ætna-izer** in your community!

Ætna writes practically every form of Insurance and Fidelity and Surety Bonds. **Ætna** protection reaches from coast to coast through 20,000 agents. The **Ætna** Agent in your community is a man worth knowing. Look him up!

Ætna Casualty and Surety Company—**Ætna** Life Insurance Company—Automobile Insurance Company—Standard Fire Insurance Company of Hartford, Connecticut.



ÆTNA-IZE

SEE THE **ÆTNA-IZER** IN YOUR COMMUNITY—HE IS A MAN WORTH KNOWING

100 per cent of oil content. The oil is to Chinese cooking what butter is to European. But Japan, always the greatest buyer of the Chinese bean, has imported much oil for use in fertilizer, soaps, and oleomargarines. In 1908, the Japanese banking-importing family of Mitsui shipped the first export of soy beans to England. This experiment, as many another of theirs, proved successful [FORTUNE, March, 1930], and England thereafter became a regular customer. Since then the oil has been widely used in European countries, and in the United States is today used by Sherwin-Williams Co., De Vos Co. Inc., and other paint companies.

As important as the extraction of oil and an inevitable concomitant to that extraction is the producing of the soy bean cakes. The cake, roughly, is what you have left after you have taken away the oil. High in nitrogen content, it is used extensively for feed and as fertilizer. Manchuria's approximate annual export is 2,240,000 tons of beans, 180,000 tons of oil, and 2,192,000 tons of cake (the beans are not often shipped in their original state). Again most of the Manchurian exports went to Japan. Japan, however, is developing an artificial fertilizer industry and producing ammonium sulphate believed to be superior to the bean cake for the requirements of Japanese soil. If this market should be closed to China, it is doubtful whether an increase of exports to European countries would make up the difference. The solution of this more or less troublesome question may well lie in further agrarian developments of China itself.

Perhaps the greatest economic and industrial triumph of the soy bean occurred, oddly enough, in Denmark. Until some thirty years ago this pleasant country was more than self-



Ewing Galloway

SOY BEAN CAKES ALONG A CHINESE WATERFRONT

supporting in the production of cereals, especially wheat. But U. S. mass production and low prices made for perilous and in some cases disastrous competition, even in Denmark's home markets. The Danes bethought themselves of raising live stock, imported the soy bean (using the oil for its usual purposes), and used it as feed for their live stock and poultry. Today 70 per cent of Denmark's export trade consists of live stock and animal products: milk, butter, cheese, bacon, ham, eggs, and the like. And for

their country's regained economic health Danes give thanks to the soy bean.

The bean came into the United States in 1804 and remained there for almost a century in the complete obscurity of being a curiosity interesting only to botanists. Then state agricultural experiment stations turned their attention to it, principally with the idea of finding in it a suitable feed for live stock. Farmers began crossing one bean with another and a typical phenomenon of Americanization occurred: the soy bean, which usually suggested rice bowls, mandarins, dusty dynasties, or chop suey, began to be known by such names as Lexington, Hoosier, Southern Prolific, Wisconsin Black, Roosevelt, Wilson. The bean was naturalized.

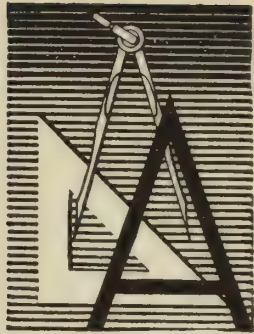
In the United States the paramount importance of soy bean is still its agricultural use. But it is significant that 75 per cent of the soy bean oil consumed in United States is being used by paint and varnish industries and in manufacture of linoleum, oil cloth, artificial leather. Lesser quantities are utilized in printer's ink, liquid soaps. Few soy beans are imported into the country.

Thus in brief the soy bean of Manchuria is now as much the soy bean of America. In the United States some 8,688,000 bushels of beans are grown annually, mostly in the Central Southern States, the harvest roughly estimated at \$70,000,000. And persistently the Department of Agriculture urges the growth of more. Its curiosity we recapitulate. As bean it is food, but unlike bean it may also be milk or cheese or fertilizer. And because of its oil it is industrial, and you can light lamps with it or use it as axle grease. It is odd but possible that you may consider a glue factory, a factory of artificial leather, a glass of milk, Worcestershire Sauce, and a handful of fertilizer . . . that you may consider them and discover that their least common denominator, their irreducible minimum is—we have presented it herewith—the soy bean.



Ewing Galloway

FOR EXPORT TO JAPAN, BAGS OF SOY BEANS AT DAIREN, MANCHURIA



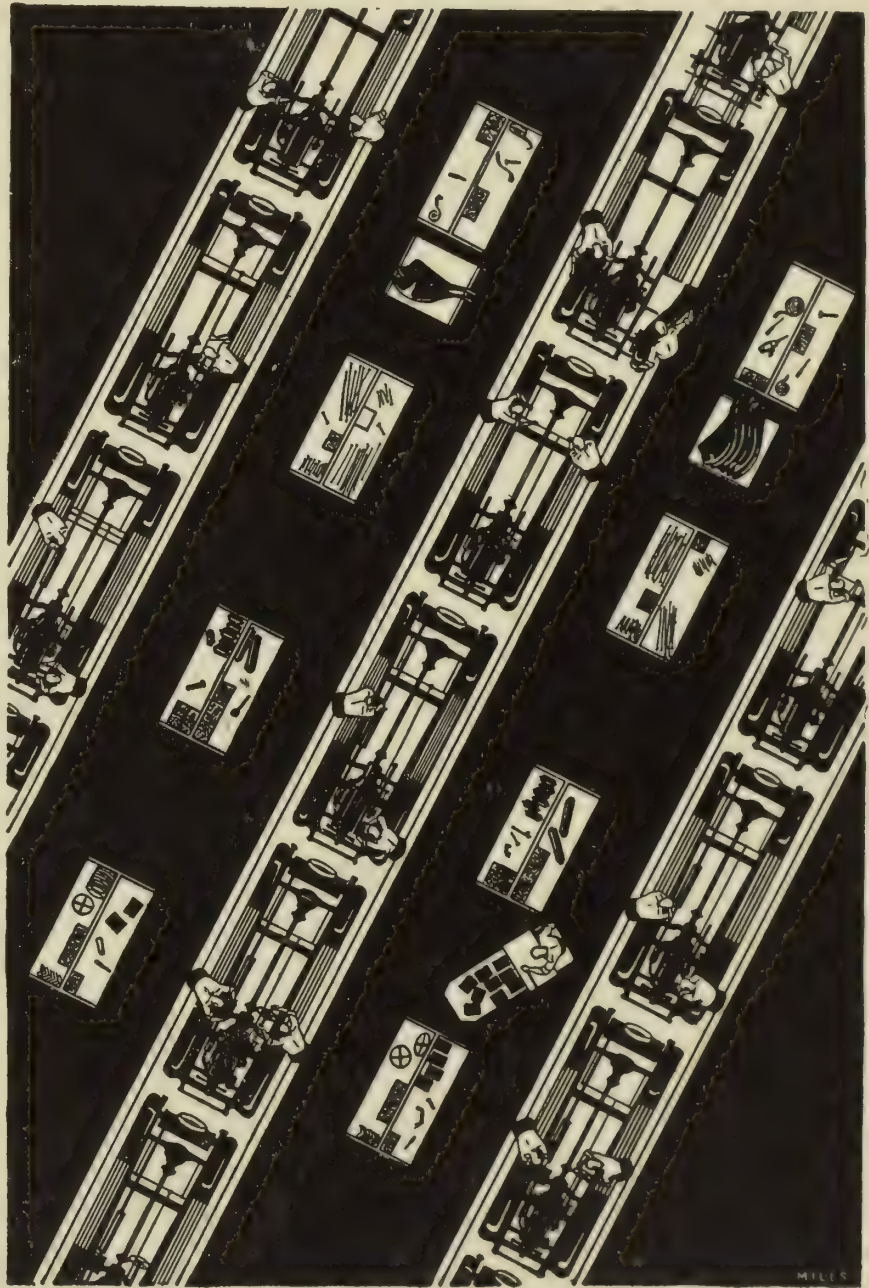
SIMPLE AXIOM becomes a serious business factor

IN class-rooms the world over, youth has learned that a straight line is the shortest distance between two points. Executives too, wracking their brains to find the most effective method of producing goods in quantity at low cost, have found that the simple axiom is also a serious business factor.

From the early experimental days when straight line production was beginning to prove its practical value to industrial executives, The Austin Company, international engineers and builders, recognized the true possibilities of this modern method of operation. Many manufacturers, too, saw its unquestionable advantages . . . some even scrapping obsolete plants to occupy new plants designed and constructed by Austin for economical production. Today, with keen competition forcing the issue, every branch of industry is adopting straight line production methods . . . and it has been Austin's privilege to design and build scores of new plant projects that will give these manufacturers a better foot-hold in the battle for business.

In the automobile industry, where even the spotting of a rivet or the driving of a screw is now a straight line operation . . . in foundries, machine shops, iron and steel mills . . . in food, ceramic and glass plants . . . in laundries and aircraft factories . . . wherever there has been need for more speedy, economical production, *there Austin has introduced straight line operation.*

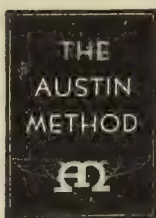
Men who look ahead . . . executives who demand that their new plants and warehouses be planned and built with an eye to the future . . . will appreciate Austin service. Many will call Austin for sound counsel and prompt action . . . for the design and construction of projects of every size, everywhere.



THE AUSTIN COMPANY

The AUSTIN METHOD of Undivided Responsibility

Design, construction and building equipment . . . separate responsibilities ordinarily . . . become one unified responsibility under The Austin Method. One nation-wide organization handles the complete project under one contract which specifically guarantees in advance, total cost, time of completion with bonus and penalty clause if desired; and quality of materials and workmanship.



ENGINEERS AND BUILDERS . . . CLEVELAND

Clash of Steel

[Continued from page 69]

closely allied with Mr. Eaton in the Cliffs Corporation, was not yet in opposition. Mr. Campbell talked with some of his large stockholders in Youngstown itself, notably with Richard Garlick and with John Tod, whose holding of 40,000 shares was second only to the Eaton block. Both men were directors; both supported the merger project. Another director, seventy-two-year-old John L. Severance, was telephoned in Pasadena and was enlisted. Mr. Harris Creech, director, president of the Cleveland Trust Co., was not telephoned.

March 7.—This series of conferences and plans for a directors' meeting to be called the following Monday occupied Mr. Dalton and Mr. Campbell until Mr. Eaton returned. On Friday, March seventh, Mr. Dalton telephoned, made an appointment to meet Mr. Eaton in the offices of the Cleveland-Cliffs Iron Co. (The Cliffs Corporation is the holding company.) There, at 3 o'clock, gathered Mr. Dalton, Mr. Eaton, and the three Mathers. And there the war began.

Mr. Eaton testified that he had not been warned of what Mr. Dalton was to tell him. Although Sheet & Tube stock, since January, had been steadily rising on the Stock Exchange, he had not found that fact challenging. At a considerable disadvantage, then, he marshaled his most powerful arguments on the spur of an exceedingly sudden occasion. He at once attacked the one and one-third for one basis, pointing out that while Sheet & Tube was selling for \$148, Bethlehem was at \$101, and one and one-third shares of Bethlehem amounted to about \$135, an immediate loss to Sheet & Tube stockholders of \$13 a share. (This was not quite true; Sheet & Tube's high on the seventh was \$142.) He recalled the 800,000 Bethlehem shares still in the hands of the underwriters and asked whether their distribution to the public would not further depress the stock's market. Mr. Dalton replied that current market quotations had no bearing on the fundamental economics of the deal. Shifting his tactics, Mr. Eaton then fired the opening gun of his major offensive: Ohio for Ohioans. In the following month, this offensive was brilliantly executed and attained tremendous proportions. Mr. Eaton himself could scarcely have realized what he was to do with it. He passed from this to the dangers lying in a rearrangement of the steel map, to the part Pickands, Mather might have played in arranging the deal. Finally he asked for time to consider. Mr. Dalton opposed a postponement of the directors' meeting set for Monday, and the conference ended. From his own office, however, Mr. Dalton telephoned both Mr. Campbell and Mr. Grace and informed them of the ill success of the meeting. It was then agreed that the directors' meeting should be put over to Wednesday and that all the principals in the matter should go to Cleveland on Tuesday to confer again with Mr. Eaton.

March 11.—This "Tuesday Conference" was one of the most curious in industrial history. Circling the large Pickands, Mather office in the block-big Union Trust Co. Building were all the protagonists of the war. The three Mathers were there; Mr. Grace and his comptroller, Mr. Schick; Mr. May and Mr. Campbell of Price, Waterhouse; Mr. Campbell and Mr. Purnell of Sheet & Tube, together with Directors Tod and Garlick; Mr. Eaton and his New York Otis-partner Ferdinand Eberstadt; Mr. Dalton. These men were assembled

to tell the largest stockholder in the Youngstown Sheet & Tube Co. about the plan to sell that company to another and to persuade the stockholder that the plan was a good one. Neither purpose had the slightest chance of being realized. By the time Mr. Eaton entered the Union Trust Co. Building, he had completely made up his mind to fight the merger, and he had mapped the campaign. Only the day before, President E. T. McCleary had spread across the Youngstown papers the promise that the new Republic Steel Corp. would keep its headquarters in Youngstown, although Republic's Chairman T. M. Girdler was even then preparing a house in Cleveland. The Youngstown *Vindicator* had printed a front-page editorial attacking the Bethlehem deal, demanding if it were to be "Youngstown, leader in the steel industry of America, or Youngstown, another pay roll town?" The lines were drawn, and Mr. Eaton had drawn them. In a speech which occupied an hour (from 11:30 to 12:30), he recounted the Grace conversation of November fifth, declared that Mr. Samuel Mather had outlined the same steel philosophy more than a year before, in Pasadena, and asked what had happened to change their minds. Mr. Mather called attention to Mr. May, who patiently sat with a sheaf of papers a half-inch thick. But Mr. Eaton had not come to discuss figures. He had come to state a position. Thus the figures remained with Mr. May, and two partners of Price, Waterhouse for the first time in their lives found themselves and their work ignored. Throughout the day they sat idle, as did Bethlehem's Comptroller Schick. When they left, they took the papers with them, and Mr. Eaton was never to see them again.

Both Mr. Grace and Mr. Campbell rose to answer Mr. Eaton. In a subtle way they were at a disadvantage. Mr. Grace is a cold clear thinker, a lover of precision. Mr. Campbell is a steelman and a crude, direct fighter. But Mr. Eaton was fighting on another front, a front of large, resounding phrases and broad considerations. This is not necessarily to condemn the phrases or the ideas behind them, but it helps explain the dramatic futility of the famous meeting of March eleventh.

In the afternoon, Mr. Eaton resumed the attack along several fronts. He cited Bethlehem's irregularity of dividend payments and then boldly launched into the question of Bethlehem salaries, asked if Mr. Grace's salary, plus bonus, did not average over \$1,000,000 a year, if some Bethlehem vice presidents drew \$300,000 or more. Mr. Campbell said he thought Mr. Grace might have taken out \$1,000,000 in some given year, but doubted if such a salary were average. From Mr. Purnell, Mr. Eaton demanded the costs per ton of Bethlehem's finished products. The figures were not available. In the meantime, Mr. William G. Mather, speaking for the Cliffs Corporation, had asked for a week's delay before the directors' meeting. "Anything else would be very unbusiness-like and improper." Mr. Eaton declared that if the Board accepted the plan on the following day, he would be left with no alternative but to oppose the merger. Mr. Campbell promised to advise him if the board were willing to postpone the decision. Mr. Eaton asked if Mr. Campbell would call off the plan if it could be shown that he (Mr. Eaton) controlled enough stock (more than one-third) to block the merger. Here Mr. Campbell spoke finely: "No, sir, I will not. I owe it

[Continued on page 108]

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Clash of Steel

to my stockholders to give them the opportunity to approve this merger. I believe they will stand by me." This was at seven o'clock, the close of the "Tuesday Conference."

March 12.—By two o'clock on Wednesday, when the directors met, it was apparent to everyone that neither a week nor a year would change Mr. Eaton's mind and that an extension of time would do nothing except strengthen the opposition. Accordingly, Mr. Campbell kept his promise and telephoned Mr. Eaton that the deal had been approved. The stockholders' meeting was set for April eighth. That night he issued a long statement, reviewing the position of Sheet & Tube and praising Bethlehem. It was the beginning of the longest series of public utterances he had ever been called upon to make. Instead of bringing peace, his December visit to Grace at the Hotel Plaza had plunged him into turmoil.

March 14-25.—On Friday, March fourteenth, Mr. Eaton betook himself to Youngstown to name his proxy committee. Julius Kahn, president of the Truscon Steel Co., was to head it; others were Chairman W. H. Foster of the General Fireproofing Company and Hugh B. Wick, a member of Wick & Co. and a nephew of that Wick who had been Sheet & Tube's first president. Another Wick—smart, *sauve* Myron C. Jr.—was the committee's secretary. During the next three weeks this committee did almost everything except collect proxies. It asked fourteen leading questions, received Mr. Purnell's answer, answered the answer, and heard Mr. Purnell dryly remark that "there will be no answer to the answer to the answer." It lost its chairman, who naïvely wrote that he had not expected the position to involve taking sides in the argument, and found another in Philip Schaff. Then Sheet & Tube tersely announced that neither Mr. Foster nor Mr. Schaff was a common stockholder when the merger was announced. It conducted a spirited debate with Mr. Campbell on the subject of Mr. May's once-neglected book. Above all, this distinguished committee sponsored one of the most brilliant publicity campaigns on record, stirring all Ohio into a frenzy of local pride, keeping this steel merger on the front pages of the newspapers for six weeks and, publicizing Youngstown as no town had been publicized since Shelby, Montana, or Dayton, Tennessee.

It was, in fact, extremely difficult to discover and cling to facts in the torrent of emotion which the campaign aroused. The excitement was of two kinds. In Youngstown literally everybody was excited. In Cleveland, although there was plenty in the newspapers, excitement became acutely personal in the upper ranks of society. Within a few weeks not only Cleveland's leading men, but also their wives, sweethearts, and daughters were to have discussed the subject so exhaustively that any mention of it was to become almost nauseating. Throughout this period the exact progression of events was less important than the emotion generated. There was, for one thing, a vigorous quarrel about accountants, in which Price, Waterhouse rejected the demands of Ernst & Ernst, the Eaton accountants. "You will find," grunted Mr. Campbell with two-edged wisdom, "there is a good deal of difficulty in getting the figures from any public accountant." At any rate Mr. Eaton did not get the Price, Waterhouse figures, and this later became the basis for one of many law suits.

Without these reports, however, the anti-merger forces conducted a campaign against the deal's justice. A series of dramatic attacks ran in five advertisements in the Ohio

papers, headed "YOU SHOULD KNOW THE FACTS." The tenor of these attacks, graphically illustrated, was that over a period of years (usually five years) Sheet & Tube had maintained an earning record considerably more impressive than that of Bethlehem. In counter-attack, the Bethlehem-Youngstown forces emphasized the future, rather than the past. They reprinted two of the anti-merger advertisements in full, together with answers to them under the clever heading, "YOU SHOULD INDEED KNOW THE FACTS." Over the anti-merger advertisement they put the headline: "HALF THE FACTS"; over their answer they put: "THE OTHER HALF." One of their best points was the rate of increase of net earnings, which they showed as follows:

	BETHLEHEM	SHEET & TUBE
1925	\$10,172,541	\$12,331,180
1929	35,779,638	23,200,000
	25,607,097 (250 per cent)	10,868,820 (88 per cent)

The answers to the proxy committee's charges were summed up in a full page advertisement printed throughout the country, signed by three accounting firms (Haskins & Sells; Lybrand, Ross Bros. & Montgomery; Arthur Anderson & Co.), analyzing the deal and stating flatly: "We are convinced that the terms of the proposed merger are fair and favorable to Sheet & Tube."

Truck drivers in Youngstown and great ladies in Cleveland glanced over these arguments and continued the argument in their own way. Some few years ago, a section of a Youngstown lung was put under a microscope and revealed a heavy coating of powdered steel, so intimately has the industry taken possession of the community. Most important Ohio papers (in Cleveland, the *Plain Dealer*; in Akron, the *Beacon Journal*; in Columbus, the *Ohio State Journal*; in Cincinnati, the *Enquirer*; in Youngstown, the *Vindicator*; the Scripps-owned *Telegram* was neutral) were ranked with Mr. Eaton and became lyric in their devotion to the Mahoning River Valley cause. The lobbies of the Hotel Ohio in Youngstown were stormy with debate; there were Ivy Lee and a corps of young men who circulated through the city testing sentiment; Mr. Eaton took half the suite of Proprietor Mark Hannan. Day by day he received the groups of citizens, the councilmen who condemned the merger by a vote of five to one. At the Sheet & Tube plant, Mr. Campbell met and persuaded his men into a unanimous vote in his support. In this time also, he was busy telephoning his stockholders. John Severance in California asked, "What can I do?" and joyfully motored 200 miles to get the proxy of a stockholder with 180 shares.

Nowhere in the battle did any single figure show to more advantage than did Mr. Campbell during these days. Family was ranged against family; every Youngstown proxy was delivered under strain. Mr. Campbell never threatened and never used his enormous personal prestige to compel a vote which would cause trouble to the stockholder. In his later testimony he even declared that he had no knowledge of the stock buying which the pro-merger forces undoubtedly were doing at this time. Sheet & Tube stock rose to 150 on the Stock Exchange; in private deals it was reported as reaching 171. The Eaton men later were to make this private buying the basis of various legal objections to the deal.

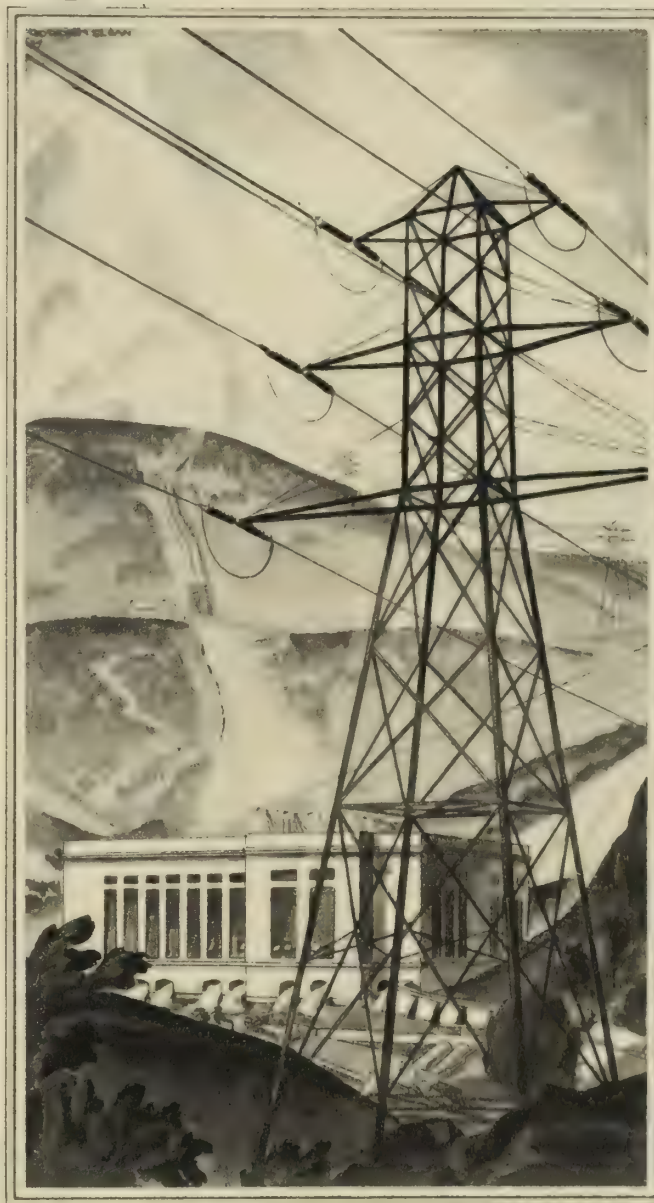
[Continued on page 110]

The Flow of Power

speeds the
flow of
Production

Modern business is tuned to the rhythmical hum of the high-tension power line. Its insistent commands have broken down ancient geographical barriers as old as the first rude paddle-wheel mill. Where once we laboriously carried raw materials to the source of power we now flash power with effortless ease to the logical seat of our production activities—however remote it may be. There we put it to work driving machines, lifting burdens, bringing light, fresh air, heat and comfort—speeding production by making work easier and more pleasant, performing tasks which would be impossible under old methods.

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Westinghouse



Clash of Steel

March 26.—On the twenty-sixth, the luxurious private car *Bethlehem* rolled into the Youngstown yards, and Messrs. Schwab and Grace received *editors*, not *reporters* aboard the car. Before lunch they went to the Sheet & Tube offices, permitting themselves to be photographed on either side of Mr. Campbell, his arms being firmly held by their hands. So dour was the appearance of Mr. Campbell that many an anti-merger zealot pasted the photograph on office walls with the caption popularized by a local newspaperman: "Two city slickers and the country boob." At the luncheon itself were enacted some highly dramatic scenes. Mr. Schwab, who is easily the most sentimental of great industrialists, allowed himself free rein in emotionalizing the deal. After opening with some facetious remarks about his willingness to help out Mr. Grace in a difficult sale, he launched into a eulogy of Mr. Campbell. As a climax, more theatrical than logical, he called upon Youngstown to "follow Jim Campbell, right or wrong!" Mr. Grace spoke in his usual precise and factual vein. When it came Mr. Campbell's turn to speak it was apparent how intense had been the strain upon his mind. His voice was choked; tears streamed down his cheeks. He again told of his long distrust of Bethlehem and the struggle he had been through before he could bring himself to favor the sale.

March 27.—Mr. Eaton did not attend the meeting. As the private car *Bethlehem* reached Youngstown, Mr. Eaton drove off to Cleveland in his roadster, thereby confounding those prophets who had expected a general meeting, reconciliation, and compromise. On the next day he returned and spoke to a similar meeting, larger in numbers because of local curiosity and because invitations had been more generally extended. His words added nothing new to the case he had already established and publicized. It was universally agreed in Youngstown that these two luncheons, widely advertised, had changed not a single vote, had indeed emphasized the futility of any general conferences on the subject. The fact was that very few proxies changed hands once they had been given, a situation closely paralleling that of the Rockefeller-Stewart proxy fight. While both the Guaranty Trust and the National City Bank of New York put additional proxy armies at the disposal of Youngstown and while Otis & Co., through their salesmen, undertook a complete canvassing campaign, the results were small. Mr. Eaton had in fact mustered the bulk of his strength before he started; Mr. Campbell's following was of a character which was difficult to influence.

Thus Youngstown waited for the eighth of April. At no time did the excitement abate. During the month, Chief Justice Taft died, the ninth planet was discovered, and a woman named Irene Schroeder was convicted of the murder of a traffic policeman. None of these events impressed itself upon the Mahoning River Valley mind.

. . .

April 2-7.—After Wednesday, April second, the entire case took on a new complexion. As its first period (roughly, from December to March) had been one of negotiation, and its second period (the month of March) had been one of violent emotions, so the third and final era of the deal could be characterized as the Era of the Law. For this, Mr. Eaton was entirely responsible, as he in substance admitted in court. While neither side could be certain of the result of the proxy battle, it became apparent by the first week of April that the anti-merger forces were making slight headway and that the

Sheet & Tube committee probably held enough proxies to vote the merger. And, as the struggle had been both long and hard-fought, there remained many loose ends which smart lawyers could weave into a suit.

Petitions for injunctions multiplied day after day, and at one time Sheet & Tube was faced, simultaneously, with four separate suits. One of the most important of these was filed in Cleveland, on the fifth, and sought to restrain the very holding of the stockholders' meeting. The sixth was a Sunday, and on that day it was discovered that the three federal judges in Cleveland were all stockholders in either Bethlehem or Sheet & Tube and therefore could not properly sit. Judge Arthur J. Dennison, Presiding Justice in the Sixth District, thereupon named Judge Arthur J. Tuttle to hear the case on Monday, one day before the meeting was scheduled to begin. The hearing was held in the Cleveland Federal Building and into the small, foul-smelling office of the clerk of the court filed Mr. Campbell, Mr. Purnell, Mr. Eaton, and no less than ten attorneys, headed by Mr. Newton D. Baker, Cleveland's most distinguished resident. Mr. Baker had been retained by the pro-merger army—he himself said "for window dressing." The hearing produced only one laugh, when Judge Tuttle at the opening asked, "Just what connection has Mr. Eaton with this case?" Attorney Clan Crawford opened the attack by declaring, "Sheet & Tube directors did not have as much information in selling their company as an ordinary man would have in buying a house." Mr. Eaton gave his long and revealing testimony, ending with the listing of the securities companies he and his firm had organized. Mr. Hassell Tippitt of Ernst & Ernst told of the rebuffs his firm had suffered at the hands of Price, Waterhouse. The session lasted into the late evening, with no recess for supper, before Judge Tuttle denied the injunction. "The amount of information offered by Bethlehem is that company's business. Dissatisfied stockholders should vote against the merger, not resort to the courts." Mr. Campbell and Mr. Purnell shook hands with Mr. Eaton, trudged to the Erie station under the shadow of the Van Sweringens' gleaming tower, ate a plate of ham and eggs.

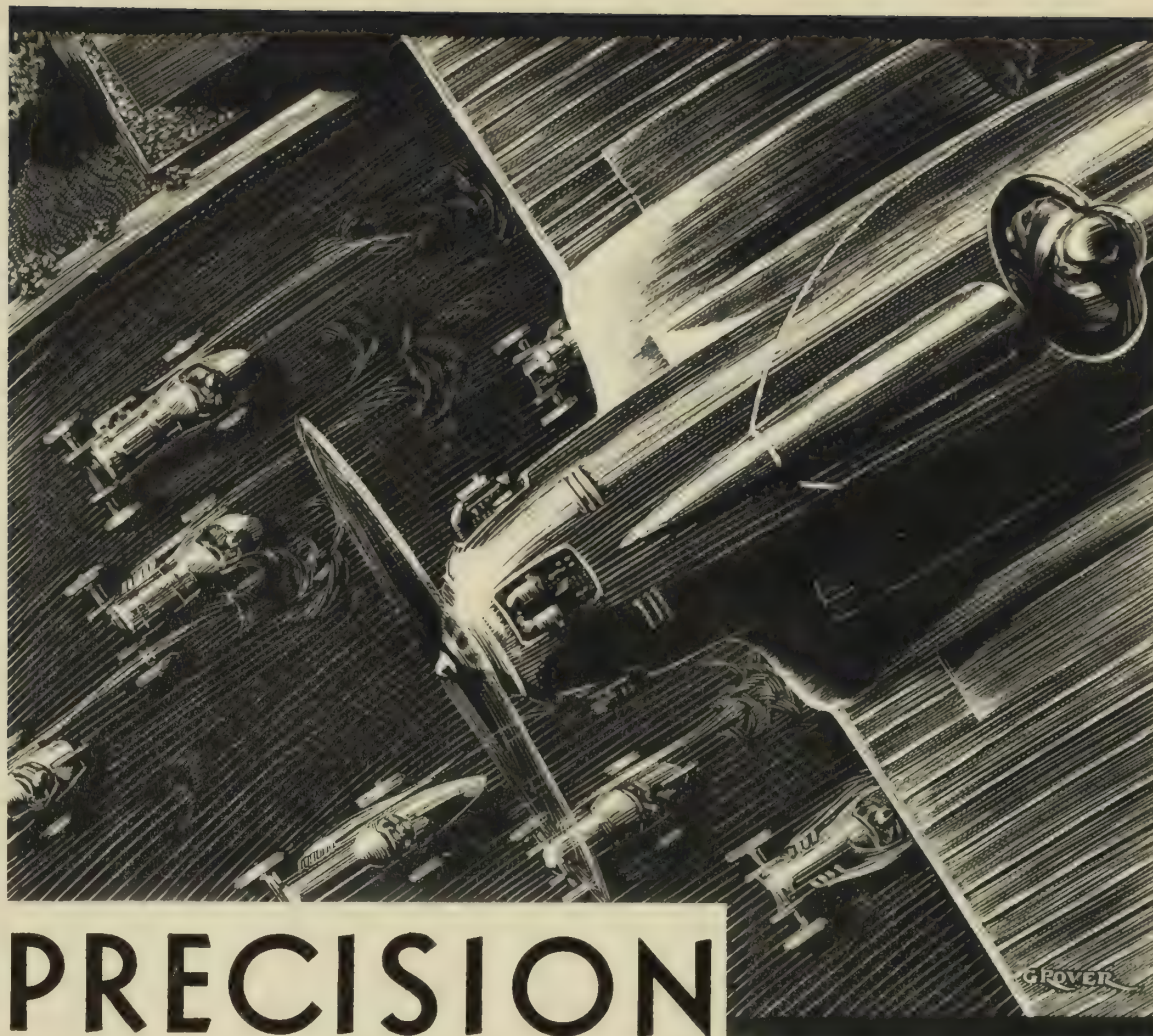
April 8-10.—This was the most significant legal skirmish before the meeting on the eighth, and the Eaton forces lost it. A far more critical situation arose in the final moments of the first day's meeting. After one o'clock on the afternoon of March twenty-second, when the stockholders' lists were closed for voting on the deal, Mr. Eaton and his interests bought 51,038 shares of Sheet & Tube stock. They knew well that they could not vote it; the proxies had probably been given to the pro-merger committee. It is possible that when they bought it, they were not quite sure what they were going to do with it. But on the morning of the eighth, while the stockholders were gathering, they used it as the basis of a new suit. They filed the suit in Common Pleas Court, and as seven of the eight Common Pleas judges in Youngstown were busy, they presented it to one C. S. Turnbaugh. This jurist came from Cambridge, Ohio, had some reputation as a student, was a thick-set, genial man with a fondness for cribbage. To him, the Eaton attorneys presented their brief. While Otis & Co. could not vote the stock, they argued, neither should the Sheet & Tube committee. Was it not unjust for stock now owned by Otis & Co. to be voted for a proposal Otis & Co. opposed?

[Continued on page 112]

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Clash of Steel

The voting began at eleven Tuesday night. Objection after objection rose from the Eaton lawyers and was neatly referred by Mr. Purnell to the Inspectors of Election. At 11:14 Mr. Luther Day (Day & Day, Cleveland) leaped to his feet and asked if Sheet & Tube proposed to vote the 51,038 shares. Mr. Baker answered: "I see no reason why not." Mr. Day in great agitation declared he would go at once to Judge Turnbaugh, and with him departed the corps of lawyers, the corps of newspapermen. As it was 11:30 by the time the army arrived at the Hotel Ohio, the good judge was sound asleep. Attorney Smith reached him first, and in some confusion the judge sent him for the county clerk and the journal, promising he would grant the injunction. By twos and threes the lawyers and reporters crowded in the room, forming an excited circle about a jurist *en déshabille*. Gradually, order was restored, and on the promise by Mr. Baker that the disputed shares would be *voted*, but not *counted*, Judge Turnbaugh put off his decision until morning. At 11:30 on Wednesday morning he denied the Otis & Co. injunction, declaring the owners of the stock, having bought it with the knowledge of its divorce from voting power, were not the proper persons to bring the suit. But at three o'clock he did grant an injunction which differed only in that the petitioner was a stockholder of record. Sheet & Tube promptly petitioned to dissolve the injunction, which had been amplified by Judge Turnbaugh to include all stock transferred since March twenty-second, a total of about 91,000 shares.

Throughout the week the stockholders, who theoretically had met to decide upon the merger, were in fact powerless. The real battleground was not the big Stambaugh auditorium where they met and adjourned, and then met again and again adjourned. Mr. Eaton had thrown their vast project into the courtrooms of the county building, and it did not leave there until two o'clock on Friday afternoon.

April 11.—Then Judge Turnbaugh dissolved the temporary injunction, noting that "it is understood by both sides that disposition of this case will not in any way interfere with future suits for injunctions." His associate, Judge Lyon, explained: "Judge Turnbaugh does not want to keep the city in continuous turmoil." And at three o'clock the stockholders for the seventh time entered the Stambaugh auditorium. This was to be their strangest session. At five o'clock, when the Election Inspectors were about to announce the vote, a personable young reporter by the name of Leslie Gould was dragged from the booth where he was telephoning his story to New York. He entered the auditorium, angry, and told of his treatment from the stage. Local telephones for the press had been installed in the men's dressing room, and they were now found to be disconnected. Several tried to leave the building, only to discover the doors locked and guarded by Sheet & Tube safety police. Then an Eaton lieutenant went to the doors, tried them, and returned to the stage. He walked to the Sheet & Tube table: "Mr. Campbell, what crime have I committed to be kept a prisoner in this building?" The Sheet & Tube executives jumped to their feet, Mr. Campbell and Mr. Purnell exclaiming: "You are not a prisoner." Mr. Campbell offered to go to the doors himself, but it was Mr. Baker who finally went and had them opened. All disclaimed responsibility for the order which had gone out to Sheet & Tube's Safety Director Woltz; later it appeared that one of the lawyers, fearing another injunction, had given the order on his own responsibility.

When the room again became calm, the inspectors announced the merger victory. Mr. Campbell had secured 857,821 votes, nearly 60,000 more than were required.

Mr. Campbell's personal triumph was no less complete because it was achieved under the shadow of the Law. Whatever future obstacles Mr. Eaton might put in the way of the deal's final consummation, the hard-fighting old man had won a notable battle. He had held the support and loyalty of his company in the face of exceedingly able opposition. He had thrown a monkey wrench into the gears of Mr. Eaton's plans.

Just what these plans had been and with how bitter a mind Mr. Eaton slipped away from Youngstown on the night of the eleventh are questions which no one but Mr. Eaton can presume to answer. He and his companies had been taking a large position in the industry; unquestionably he looked toward fresh consolidations with the Ohio companies as the nuclei of larger units. Since the opening of the battle, he has on several occasions emphatically denied any desire to add Sheet & Tube to the Republic combination, and while Republic's President McCleary *did* make another trip to Youngstown in March to urge such a step on his old friend Mr. Campbell, this may well have been his own idea, unauthorized by Mr. Eaton. In any event, it was no part of Mr. Eaton's plans to see Sheet & Tube, the industry's fourth largest unit, joined with Bethlehem, already a good second to great U. S. Steel. By his battle, Mr. Eaton may have saved this particular situation. But he has made some enemies and put potential enemies on their guard. Whatever may be the issue of the new suits filed in Youngstown to block the merger, the war has not contributed to the ultimate success of Mr. Eaton's ambitions.

Nor, in all probability, has it left any deep cut across the steel industry. The Youngstown plant, with its total ingot capacity of over 3,000,000 tons annually, will continue to pour forth steel sheets and pipe, whether it be for Wall Street or for Otis & Co., for the scattered stockholders of Bethlehem or the old families of the Mahoning River Valley. With it will be combined another producer, to round out its list of products, to add the rails and structural shapes for which it has no capacity. If this producer is not Bethlehem, then it will be Inland. Conceivably, and if Mr. Grace's ambitions lie that way, it may be both Bethlehem and Inland, to create a company more nearly able to challenge U. S. Steel. Mr. Eaton and his allies have seen this as a potential danger, forecasting price wars between the industry's leader and the runner-up. Few outside observers share this alarm. It is in fact difficult for changes in the industry's control to greatly change the industry's fundamental geography. Iron ore, exhausted in the Ohio valleys, is still abundant in Minnesota; freighters still transport the ore across the Lakes. Mills not too far from the source of supply still process the ore, transmuting it into forms the world needs. The great consuming markets still lie in the East and Middle West. Neither Mr. Eaton nor Mr. Campbell nor Mr. Grace can largely alter these fundamentals. Mr. Eaton quoted Mr. Dalton as saying of the middle-western companies: "They all go to New York, sooner or later." But it will be a long time before a Youngstown puddler loses his job because steel sheets are rolling out of a mill in lower Manhattan.



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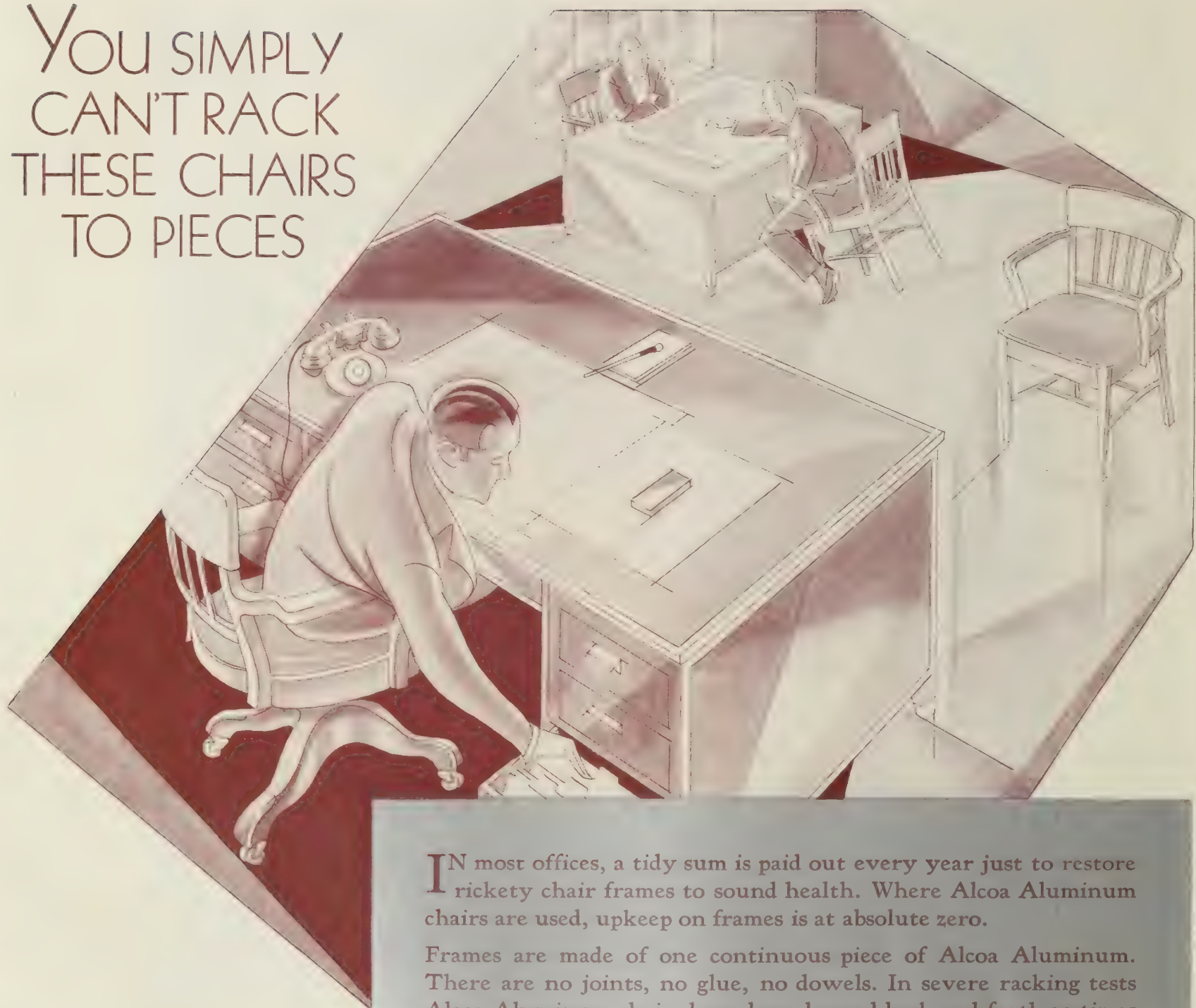
S T A T E S



R U B B E R

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THESE CHAIRS
TO PIECES



IN most offices, a tidy sum is paid out every year just to restore rickety chair frames to sound health. Where Alcoa Aluminum chairs are used, upkeep on frames is at absolute zero.

Frames are made of one continuous piece of Alcoa Aluminum. There are no joints, no glue, no dowels. In severe racking tests Alcoa Aluminum chairs have been banged back and forth 30 times a minute for 150 hours with no sign of wear. Given this same test, glued chairs broke down in a very few hours.

Alcoa Aluminum chairs are made in natural aluminum finish, in walnut, mahogany and oak wood grains, and two shades of green. They are upholstered in full grained mission leather in green, blue, brown or maroon. Also in a wide variety of fabric upholstering.

Many styles and types of executive, clerical, stenographic, hospital and hotel chairs are available. May we send you a free copy of a special booklet, "Distinctive Chairs of Aluminum"? ALUMINUM COMPANY of AMERICA; 2402 Oliver Building, PITTSBURGH, PENNSYLVANIA.

CHAIRS OF
ALCOA ALUMINUM

Among Those Fighting in Latest Steel War



P. & A. MR. EATON



P. & A. MR. SCHWAB, MR. CAMPBELL, MR. GRACE



MR. PURNELL

IGAME
PUBLIC
LIB.



International

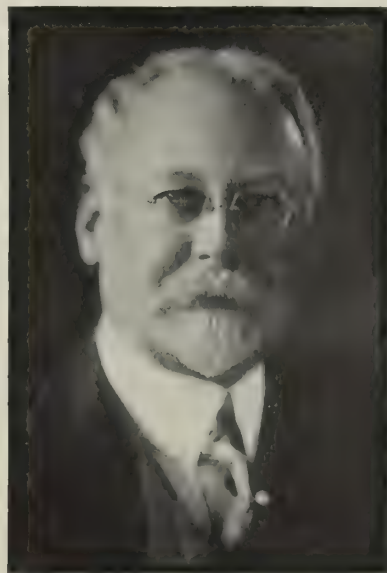
AT THE STOCKHOLDERS' MEETING. IN THE FOREGROUND ARE MR. TOD AND MR. GARLICK



MR. W. G. MATHER



Keystone MR. BAKER



MR. SEVERANCE

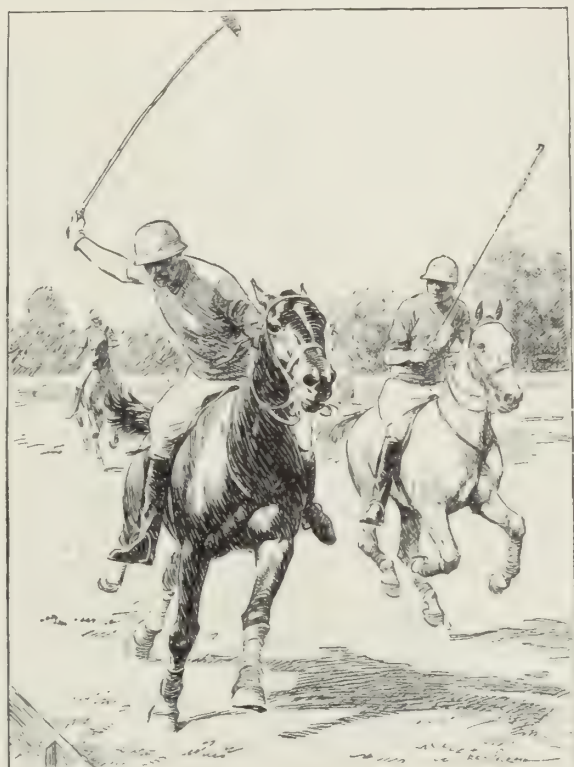


MR. DALTON



Brooks Brothers, CLOTHING, Gentlemen's Furnishing Goods.

MADISON AVENUE COR. FORTY-FOURTH STREET
NEW YORK



© BROOKS BROTHERS

Clothes for the Horseman

Complete and Correct Equipment
for Polo, etc.

Send for "A Wardrobe for
RIDING & POLO

BRANCH STORES
BOSTON
NEWBURY CORNER OF BERKELEY STREET
NEWPORT PALM BEACH

Rufus Lenoir Patterson's Cigar Machine

[Continued from page 58]

One curious distinction is worth noting. Whereas cigarette machines are sold outright to cigarette manufacturers, the cigar machines are merely leased. At \$1.00 per thousand cigars royalty in addition to cost and upkeep of the machine. (This in actual practice yields about \$620 per machine, indicating that not many of the machines are producing at their capacity of 1,000,000 per year.)

This royalty is no pain to the manufacturer. It is not possible to make cigars by hand at less than \$8.00 per thousand. In some cases wages run to \$22 per thousand. Let us assume that \$12 is an average. The machine even in relatively small quantities can produce for \$6.00 per thousand (including the royalty), and the user is therefore a boor if he grumbles at yielding \$1.00 to the Machine's god.

Applying the most sophomoric economics to this Patterson creation, we find such characteristics of the machine age as the following quickly projecting themselves:

1. Hand labor is beaten. Hence the household or small concern of any sort quits. Already down from 22,000 to about 6,000, it is conceivable that within a decade there may be only a few hundred cigar manufacturers. More importantly, nearly all the cigars that are made will be made by a very few concerns. Four or five concerns make 95 per cent of all our cigarettes.

2. The cheapest product develops the biggest market. Only ten years ago the five-cent cigar accounted for considerably less than a third of all U. S. made cigars. Now the five-cent cigar is well over the 50 per cent mark and is the only class of cigar showing rapid gains. In another decade it may be as unusual to pay ten cents for a cigar as it is to buy made-to-order shoes—the prerogative of the rich and fussy.

3. Advertising is the inevitable Pythias to the Damon of the Machine, the Jonathan to its David, the Leander to its Hero, the Mutt to its Jeff. Why the cigarette? The War and other incidentals played a part. But mainly it was the machine—and advertising. Compared with the cigarette, the cigar has never been advertised. Few cigars have had a national reputation. A Blackstone was loved in New England, unheard of in Des Moines. In the face of this situation, even the biggest manufacturer lacked

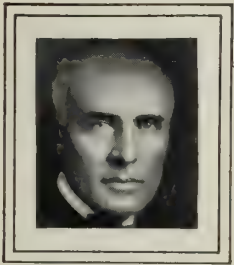
faith to risk millions in advertising in order to obtain national sale. And, dependent on hand labor, he could never be sure that something (such a machine or such a union) might not undo him. Now not only George Washington Hill but other manufacturers have leaped into partnership with advertising so that presently there will be a cigar as famous as a Camel. And (Who dare deny it?) the partnership beginning by selling the male on the cigar's masculinity may end by selling the female its femininity. Was it not mere prejudice which kept most Carmens from smoking the stogies they made?

Profounder economics of the machine need not trouble us here. But consider finally the Pride of the Machine, for a machine is invested no less than the clipper ship with the pride of its skipper. Long years ago, a Mr. Owens invented a way to blow glass by machinery. But the glass-blower, although he became scarcer, was certain he would never be extinguished, for no machine could master the finer subtleties of his art. Challenged, the manufacturer never rested until, just before he died, the plans were completed for a glass-machine factory—in Venice.

Like glass to Venice are cigars to Cuba, whence issue the very best. And of these the most famous, if not the most expensive, is the Corona Corona. Mr. Patterson's machine already makes some three hundred different shapes and sizes of cigars (of course, one effect of the machine will ultimately be to reduce the different types of cigars from thousands to dozens; so now is the time for all good cigar-band collectors to complete their quests). But the difficulty is not only in the superfinenesses of its fittings, but also in a very small queer hump which appears on its mouthward end. There is no reason for it, but it is Corona Corona. Furthermore, all the Corona Coronas in the world could be made on a dozen machines, so that Mr. Patterson's revenue would be trifling. Nevertheless, you guess the answer. Even if it takes hundreds of thousands to make a Corona Corona machine, the comic spirit will not rest until this cigar's snobbery has succumbed to its wit. This is to predict that the Corona Corona machine will be perfected. And to refer the reader to page 148, where is printed *A Note on the Cuban Revolution*.

“Advertising”... *says* FRANCIS H. SISSON

*“is perhaps the Greatest Agency
of Natural Selection in the
Business World” . . .*



FRANCIS H. SISSON
Vice President of the Guaranty
Trust Company of New York

“It accelerates the process whereby the world’s productive activity is becoming centralized in the hands of those who are best equipped to carry it on.”

IN this statement Mr. Sisson points out with admirable clarity the rôle of advertising in the modern economic process.

Production facilities today are wonderfully efficient, but adequate and suitable markets are needed before the most effective organization of production can be achieved.

It is the function of good advertising service to locate and develop these necessary markets on the scale which modern industry requires, and with a selectivity which keeps costs at a minimum.

Many manufacturers, through the use of such services, maintain an active demand for their products—and keep in a position to profit by the economies of large-scale production and concentrated control.

In the cultivation of markets essential to this achievement, the J. Walter Thompson Company has successfully served many of the leading enterprises of this country, helping to work out practical market strategy based upon accurate research and wide advertising experience.

Two folders, entitled “Selling at Home” and “Selling Abroad,” have been prepared briefly to show the scope of the services of the J. Walter Thompson Company.

Either or both of these folders will be sent to executives interested. Write to the New York Office and copies will be forwarded promptly.



BURLINGAME
PUBLIC
LIB.



Five or more electrical appliances, a J. Walter Thompson survey indicates, will be found in 76% of all average households. Electricity now reaches over 19,700,000 American homes. New conditions which electric power develops in the home have a marked influence even on the market for articles seemingly as remote as soap and textiles. Study of such influences, on which sound market strategy is based, enables the J. Walter Thompson Company to prepare advertising which strengthens the position of its clients in their many markets.

J. Walter Thompson Company

New York • Graybar Building • 420 Lexington Avenue

Chicago, Boston, Cincinnati, San Francisco, Los Angeles • Montreal, Canada • London, Paris, Madrid, Berlin, Stockholm, Copenhagen, Antwerp, Warsaw • Alexandria, Egypt; Port Elizabeth, South Africa • Buenos Aires, Argentina; Sao Paulo, Brazil • Bombay, India • Sydney, Australia • Batavia, Java

French Seamen

whose ancestors tamed the Atlantic before Columbus

SPRUNG from countless generations of seamen, the sailors of Brittany have a maritime tradition not surpassed by any race and to every Breton fisher lad may truly be applied the old sea saying, "Every hair a rope yarn, and his blood is Stockholm tar." They are of the blood of Jacques Cartier who flew the ensign of St. Malo and discovered the St. Lawrence. Unceasing watchfulness is their motto, whether at the helm of a sardine trawler or on the bridge (their ultimate goal) of the "Ile de France," the "Paris" or the "France"...the cabin ships "Lafayette," "De Grasse" and "Rochambeau" or any of the 100 ships that form the French Line fleet. From the commander to the oiler in the hold, they keep alight that flame of trust and honor that was lighted in the dim sea mists of the Breton coast a thousand years ago.

"Rochambeau"
June 7-July 5-Aug. 9

...

"De Grasse"
June 17-July 12-Aug. 12

...

"Lafayette"
June 26 - July 24

♦ ♦

"Ile de France"
June 6, 25-July 11

...

"Paris"
June 12, 30-July 18

...

"France"
June 17 - July 3 - July 25

Five and a half days to Plymouth, England

across the "longest gangplank in the world" from the heart of Manhattan, a waiting express for London, a few hours later the covered pier at Havre, three-hour express for Paris.

Along the Brittany Coast



French Line

Information from any authorized French Line Agent or write direct to
19 State Street, New York City

The Plant Man Wears

[Continued from page 80]

the cotton had to be of the native type whose bolls never fully open and therefore protect the cotton. Now, able to pick as soon as the cotton is ripe, they are turning to American varieties.

CHINA

India, Africa, Russia, all may some day violently upset the world's traffic in cotton. But upon the development of Chinese cotton hinges an economic event of far greater significance. For it is with the growth of the cotton industry, with the multiplication of textile mills, that China hopes to effect its long-awaited industrialization.

For centuries cotton formed a garden decoration that delighted Chinamen of ancient dynasties who were busy nursing silkworms. Only in the 14th century did Chinamen commence to plant cotton commercially. Now China has four important cotton areas. Most northerly is a great oval of cotton land surrounding Peking, which, being so far north, is a phenomenon. Below that is a narrow, winding strip that follows the Hwang Ho from its mouth far into the interior. Broader is the third section, starting at Shanghai, running inland along the Yangtze and extending one slim arm southward into the province of Kiangsi. Slight in importance is the fourth, far in the south, near Burma.

Cotton in China was long a sickly industry. Exports were few because all the buyers of the world knew that Chinese cotton was adulterated to a disgraceful extent. Certain organizations tended to stop this treatment of cotton and to better its cultivation. At the same time the ban on opium-growing gave cotton a great impetus.

Land in China has been raised to its highest state of productivity. Usually wheat is grown before cotton and when the wheat is ready for reaping in May, cotton is planted broadcast, later hoed and thinned with infinite trouble. Great confusion marks the farming system, one man often having no more than half an acre. This prohibits expenditures on good fertilizers and modern equipment, and the farthest away from actual hand labor the average farmer gets is a rough wooden plough, metal tipped, drawn by oxen or buffaloes.

Lack of statistics makes the Chinese crop hard to estimate. Some-

thing less than 2,000,000 bales is the generally accepted figure. Usually China imports more cotton than is exported, and the textile industry is developing rapidly. The country, growing one-seventh as much cotton as North America, has one-tenth as many spindles. With the largest home market in the world, and one too poor to purchase wool or silk, with a growing supply of raw material, with cheap labor and power, China may eventually cease importing cotton and cloth. This will mean a loss of a great market for the Western textiles and a loss of a market for raw Indian cotton, but on the other hand the industrial progress of China means a wider market for machines, building materials, luxury goods, and all the other incidentals of progress.


SOUTH AMERICA

Many of the nations of South America are admirably suited for cotton, but, lacking the stimulation of an Empire Cotton Growing Corp., their importance is great only in the remote future. Brazil, however, seems forging to the lead at present, although the Argentine possesses great potentialities. Cotton has been grown in Brazil since 1570, and from 1781 to 1800 Lancashire's chief source of supply was this nation. With the abolition of slavery in 1888, however, cotton was practically abandoned and only recently, disgusted with losses sustained from rubber and coffee, have Brazilian farmers turned again to cotton. The area adaptable for cotton is larger than that in the United States, labor is cheap and kept plentiful through the encouragement of immigration, the soil has a high yield, and all things point to Brazil's soon becoming an even more important factor in cotton production.

MEXICO

Mexico, to cotton men in the United States, remains famous as a cotton nation chiefly for having been the starting point of the boll weevil's march and presumably that of the pink boll worm. But here too is a nation with great cotton potentialities. While the crop is small now, the area suitable for cotton is large and filled with an agricultural population. Only political unrest stands in the way of a great systematic increase.

WHICH HOTEL WILL HE CHOOSE, ON HIS NEXT VISIT? •

BACK from a successful business trip, ready to plunge into the work that has accumulated on his desk. First, the day's mail. He opens a long, crisp envelope bearing a familiar crest, and takes from it a letter. It is a brief, sincere message of friendship and appreciation from the hotel at which he stayed. It is on the private stationery of the President. And it is signed—not by a room clerk—not even by the manager—but by the head of the great chain of hostelries, himself. • The letter touches his mind with a sense of warm, personal contact. He has ample proof of its genuineness. Not only does its signature carry conviction, but as the business man holds it to the light he sees the famous watermark of Coupon Bond. There will be no question as to “where to stop” when next he travels that way. • Coupon Bond is a supreme achievement in bond paper making. It is strong, clean, vigorous—the master paper chosen by masters of American business for their executive letters. • We shall be glad to send you, on request, our portfolio, “The Modern Trend in Letterheads,” and a new booklet, “The Executive Letter.” (In writing for them please use your business stationery.)  *Coupon Bond is but one paper in the Eagle-A Line of Bonds, Ledgers, Writings, Index Bristols, Offsets, Covers, Book Papers, Mimeograph and Manifold Papers—the right paper for every business purpose.*

AMERICAN WRITING PAPER COMPANY, INCORPORATED
HOLYOKE, MASSACHUSETTS



EAGLE • A • PAPERS

BRING YOUR SALES MANAGER INTO YOUR OFFICE...



...without taking him out of his!

YOUR sales manager's office may be "just down the hall" or at the other end of the building . . . Regardless of distance you may enjoy instant voice-to-voice conversation with him at any hour of the day thru the DICTOGRAPH SYSTEM OF INTERIOR TELEPHONES.

DICTOGRAPH cuts the distance factor out of inter-office communication. As simply as you switch on an electric light, you "switch" on the voice of an individual by merely raising a key and talking. If that person had just stepped into your office, his response could not be more immediate.

With startling realism, his words coming from the DICTOGRAPH loud speaker give you the information you desire—*promptly!* A sensitive microphone in the DICTOGRAPH cabinet picks up your voice and carries it clearly to any other office. At no time is it necessary for you to leave your desk or take a man from his!

Your department heads make their reports, answer your questions, even engage in a "conference" without the nuisance of inter-office visiting—without tying up the switchboard with internal calls. DICTOGRAPH uses no switchboard—there are no mouthpieces or receivers to handle.

In large offices and small, in factories and stores—in any organization where speed, accuracy, and executive control are valued—DICTOGRAPH communication is a daily comfort and economy.

It will take but a few moments to show you DICTOGRAPH in actual operation on your desk and it will not obligate you in any way . . . Consult the telephone directory for our address in your city. Or write direct to DICTOGRAPH PRODUCTS COMPANY, Inc., 226 West 42nd Street, New York, N. Y.

DICTOGRAPH

SYSTEM OF INTERIOR TELEPHONES

The Modern Miracle of Business



Rembrandt's Painting of Solomon's Mother

[Continued from page 63]

as he loved the idea and substance of soldiery, had just successfully completed the Seven Years' War in which he not only embarrassed Count von Brühl's Saxony, but Austria, France, Russia, and Sweden as well. In these miserable times, his collections must have been fardels which Count von Brühl could ill afford to bear.

In Dresden, then, for an unknown sum, he sold Bathsheba across the borders of Europe to Paris, in whose salons her charms had already been described. The buyer was one M. Poullain, a celebrated collector of paintings on his own account, and a high-ranking collector of taxes for his king. It was an opulent time on the plane of court life; few persons on this licentious and sportive eminence paid any heed to the volcanic beginnings below. It was only natural that Rembrandt's lush Bathsheba should be received at such a court. Bathsheba stayed with M. Poullain while Louis XV was succeeded by the virtuous and genial Louis XVI, from whom the proletariat hoped for reform but who combined with his prowess in eating, hunting, and lock-making a genius for the selection of disastrous financial advisers.

The French Revolution

In 1780, while the elegance of Paris and its outlying châteaux was still sustained beneath this uncertain sceptre, the *Toilet of Bathsheba* again changed hands. M. Poullain's estate obtained 2,400 francs (\$480) from no less significant a figure in French art than Jean Baptiste Pierre Lebrun, art-dealer, critic, passionate gambler, and husband of the renowned Vigée Lebrun, who painted the Prince of Wales, Lord Byron, more than twenty portraits of Marie Antoinette, innumerable pictures of herself, and whose musicals were so crowded and distinguished that Marshals of France were frequently to be observed squatting on the floor. "I remember," she wrote, "that the Maréchal de Noailles, who was very stout and very old, one evening had the greatest difficulty in getting up again."

The gentle M. Lebrun's unhappy liking for games of chance made it difficult enough for him to maintain his collections, but there was another factor which speedily prevailed and which made it highly advisable for him to sell Bathsheba: the French Revolution. In 1791 Louis XVI fled

into the country and returned a prisoner. All was wrack and confusion in France. M. Lebrun tried to sell Bathsheba, but received such unsatisfactory offers that he bought the painting in for 1,200 francs (\$240), half the price he had originally paid for it.

1814—Sir Thomas Lawrence

Expedience, however, must at last have forced him to part with his prize; as Bathsheba once went from an upset Holland to a relatively stable Saxony, so she now went from an upset France to a relatively stable England. We next hear of her, twenty-three years later, in 1814, when Alexis de la Hante, a dealer who had probably admired her at the Lebruns' in Paris, sold her in London for 105 pounds (\$510). This year was one of baited breaths and a crescendo of rejoicing in England; bankers stopped each other on Threadneedle Street to talk of Wellington's latest deeds; England's wars against Bonaparte were no longer fought alone. British court life was almost as elaborate as its French counterpart of pre-Revolution days. It must surely have been at this time that Sir Thomas Lawrence, who had succeeded Reynolds as Britain's favorite court painter, acquired the Rembrandt. Thomas Lawrence was the son of an innkeeper of Devizes, England. At the age of five the boy amazed the patrons of the Black Boar with his ability to catch their likenesses with a crayon. Lifted up on a hogshead, he would declaim Milton and Shakespeare. Nor did this precocity fail; at twenty-one he was elected to the Royal Academy and had already begun to paint the patriots of England. He succeeded to the suave, florescent style of Reynolds and Gainsborough, the style best adapted to the delineation of velvets and jewels, of faces haughty and imperturbable.

When he died in 1830, his belongings were auctioned at Chrystie's; Bathsheba appeared amidst Reynoldses, Raphaels, Giorgones, Veroneses. She fetched 157.10 pounds (\$765); another Rembrandt, depicting the accusal of Joseph by Potiphar's wife, brought the top price of 570 pounds (\$2,770).

1830—H. M. the Queen

England was now entering the



*Richard The Lion Heart
casting his gauntlet in chal-
lenge before King Philip*

BURLINGAME
PUBLIC
LIB.

Gauntlets of Richard, Painted by Ludwig Gassner

Answering the CHALLENGE

The mailed gauntlet in the days of Richard The Lion Heart was significant of a challenge. Today—out of the hustle and bustle of modern business methods—Lyon Metal Products have answered the challenge—with steel—answered the challenge for system, speed, service and beauty—answered the challenge for an ever-increasing growth of business. Lyon Metal Products are built by skilled craftsmen—built through years of experience—built to speed up every transaction—to conserve cost and render better service—built to save space and increase efficiency—built to endure wear and tear—built to answer any challenge! Adaptability is an outstanding feature of Lyon equipment—in factory or office, store, schoolhouse, country club or in the repair shop, Lyon has equipment for every purpose, adapted to your specific needs, easy to move and convertible to all conditions. You will enjoy reading "Equipment and Man Power." Your copy is awaiting your request.

LYON

LYON METAL PRODUCTS, INCORPORATED
Converters of Sheet Steel into Practical Conveniences
A U R O R A , I L L I N O I S

STORAGE AND DISPLAY EQUIPMENT IN STEEL
STORE FIXTURES; COUNTERS AND SHOW CASES
SHELVING; LOCKERS AND CABINETS
FOLDING TABLES
AND CHAIRS

Another Phoenix rises from the Ashes of Pleasure

So steadily has
the popularity
of Lucky Strikes



been rising, that hardly was the newest American Tobacco Company factory at Reidsville, N. C., completed, before it became necessary to make plans for another and larger plant.

This Lucky Strike factory is now under construction at Richmond, Va. Both it and the adjoining power plant will be representative of the best developments in design, architecture and equipment of this progressive age. Coupled to these features will be elements to add the dignity and beauty which contribute to the "esthetic efficiency"—so much a part of the modern workshop.

J. E. SIRRINE & COMPANY

Engineers

Greenville

South Carolina



BURLINGAME
PUBLIC

LIB.

long and economically healthy age of Victorianism; Parliamentary reform was well begun. Stomachs accustomed themselves to elaborate and copious foods, interior decoration acquired more tassels, and rarities like the *Toilet of Bathsheba* began to increase in value.

In 1831 one Vernon sold the canvas to one Emerson for 160.13 pounds (\$780). Next year Emerson accepted an offer of 252 pounds (\$1,225), and Bathsheba traveled back to the Low Countries to Brussels, into the collection of one Colonel de Biré. Nine years later she returned to Paris, politically confused and corrupt under Louis Philippe, but battening, expanding, and modernizing on its corruption. There Colonel de Biré sold her for 7,880 francs (\$1,575) and, after a circuitous career of approximately a century, she returned to her native Holland where the Chevalier Steengracht van Ostkapelle of The Hague, director of the Royal Picture Gallery, was fast atoning for Dutch lapses of taste by collecting as much as possible of the great Dutch art which Dutchmen had been willing to sell to foreigners.

B. Altman & Co.

Bathsheba spent another half-century with the Steengrachts in Holland. During this period a new and overwhelming fiscal force was becoming increasingly apparent in the art world, U. S. finance. American fortunes had been made, and numerous fortunate Americans were prepared by their predilections and pocketbooks to become patrons of the arts. Among these was Benjamin Altman, the founder of B. Altman & Co., dry goods merchant of New York City. Benjamin Altman determined to sell and sold the finest possible merchandise at honorable, not extortionate, prices. His Fifth Avenue store ignored fads unless by persistence they became conservatively tasteful. He was never interviewed, nor was his photograph ever published during his lifetime. Indeed his nature is perhaps best suggested by the fact that he was a great expert on porcelain and, according to his doctor, was recognizable by not more than a hundred of his fellow townsmen. His art collection was and is of the first importance. He was succeeded by Colonel Michael Friedsam, a superior merchant, who is himself in the front rank of American art patrons.

In 1913, when the Steengracht collections were offered at auction in Paris, Mr. Altman was represented by that most suave and powerful of art-dealers, Sir Joseph

Duveen. The entrance of the Americans into art collecting, the increasing prosperity and dilettantism of the Western World had done amazing things to values in the seventy-two years that Bathsheba had been absent from the auction rooms. When she appeared upon the block, bidding began at more than 150,000 francs, and Mr. Duveen was soon pronouncing 600,000 francs as his offer while his rival, Mr. Wildenstein, countered with nods of the head signifying a raise of 10,000 francs (\$2,000) apiece. Gradually a group of competing dealers were forced out.

Mr. Wildenstein nodded—970,000 francs.

Mr. Duveen nodded—980,000 francs.

Mr. Wildenstein nodded again—990,000 francs.

When Mr. Duveen bid a million francs (\$200,000), Mr. Wildenstein's head was motionless.

At last, the Museum

In one of the last years when a franc was still a franc, Rembrandt's *Toilet of Bathsheba* had brought what at the time was the highest price ever paid for any painting at public auction. It is not likely, however, that she will soon be sold again, for in 1913 the Altman collection was bequeathed to the Metropolitan Museum of Art, and that repository seems as substantial, if not more so, as the city of New York itself. Bathsheba's status as the subject of a six-figure painting entitles her to the consideration of financiers and to the financially ambitious in general. But what is perhaps stranger, it also entitles her to the consideration of esthetes. For although there is no direct connection conceivable between the financial and esthetic value of a work of art, the fact remains that those pronounced great by generations of critical specialists gradually command the highest prices. Financiers, in this field, at least, are influenced by men who deal in nebulous uncertainties, and the process of valuation provides that the economic value of a painting shall be no insignificant key to its position in more subtle estimations.

Had Bathsheba's first buyer kept his \$106 banked at 4 per cent interest compounded semiannually, his estate could now withdraw \$242,428.89. Had he kept Bathsheba, his estate could probably realize a great deal more. For Bathsheba's final price has been greatly exceeded in the case of other paintings, and there is no telling what sum she might now command.

20th ANNUAL

Roll Call

WHITE FLEETS OF 10 OR MORE



The LEADERS of American Business build their transportation fleets with WHITES

The great White Roll Call, published annually for the past twenty years, again tells the greatest transportation story ever told—1408 of the country's foremost owners operating 49,250 Whites in fleets of ten or more—2739 more

Whites than last year—97 additional owners who are now operating fleets of ten or more—and not listed are tens of thousands of additional owners operating fleets of less than ten, or single Whites. *The White Company, Cleveland.*

WHITE

A COMPLETE LINE OF FOUR AND SIX CYLINDER
TRUCKS ~ BUSES

GENERAL



BURLINGTON
PUBLIC
LIBRARY

AVERAGES

*His handsome cloak hides
the ugly wastes of Business*

THE manufacturer looked up at his friend, the banker, with pained surprise.

"Why do you say my figures should go deeper?" he demanded. "Doesn't my statement show a record year . . . in sales, in net earnings, in increased cash reserves? All along the line, in costs and net results, my General Averages show a big improvement. What else do I need to know?"

"Many things!" replied the banker drily, "if you're going to cope with the new conditions in the gruelling year ahead.

"When a business is going great guns, old man 'General Averages' isn't especially informative about its possible weaknesses. He has a genial way of showing up the bright side of things and concealing the wastes. In emphasizing the profits he diverts attention from the parasites that may some day claim a costly reckoning.

"For instance, your 'General Averages' show that your sales cost per dealer is less than 8%. But have you secured a detailed break-down of this pleasing percentage? It may startle you to know that 20% of the dealers in your trade do 85% of the retail business. Many of the remaining dealers cost more to sell, contact and service than the gross dollar volume of their purchases.

"Again, your 'General Averages' indicate that you are turning your inventory three times a year. But do you actually know how many items in your line are genuine revenue-makers?

"The government's Business Survey in Louisville disclosed that in several prominent wholesale houses, items which produced only 14% of the total sales required 42% of the inventory investment. And these were prosperous houses. Their bland and rosy 'General Averages' kept them in ignorance of their many profit-drones and wastrels.

"In the flood-tide of a seller's market, a business can stand many abuses without feeling or even suspecting the drains. But when competition increases, the whole issue of dividends versus deficits often hinges on the elimination of waste.

"That's why, on the eve of this new and

more competitive age, I warn you against the wiles of that jovial flatterer . . . 'General Averages.' Sound business men today are keeping him on the grill, in every department of their businesses . . . ruthlessly tearing down his round figures and finding out what is back of them."

GET THE LOW-DOWN ON "G. A."

Daily and Accurately

It is easier today than ever before to flood-light every department and operation of your business with the penetrating rays of adequate facts and figures.

Put the whole job up to Remington Rand. Turn to the one centralized headquarters for all of the systems and machines you need to solve your problems of business control.

Remington Rand Service is unbiased and all-embracing. It is not a special pleader for any one type of appliance or method. It is a merger of all of the best systems and machines for facilitating the functions of any business.

A telephone call will bring a Remington Rand man to your office . . . a trained business analyst who will confer with you impartially on any phase of your business operations . . . without involving you in any obligation.

Remington Rand BUSINESS SERVICE

Executive offices, Buffalo, New York. Sales offices in all leading cities.

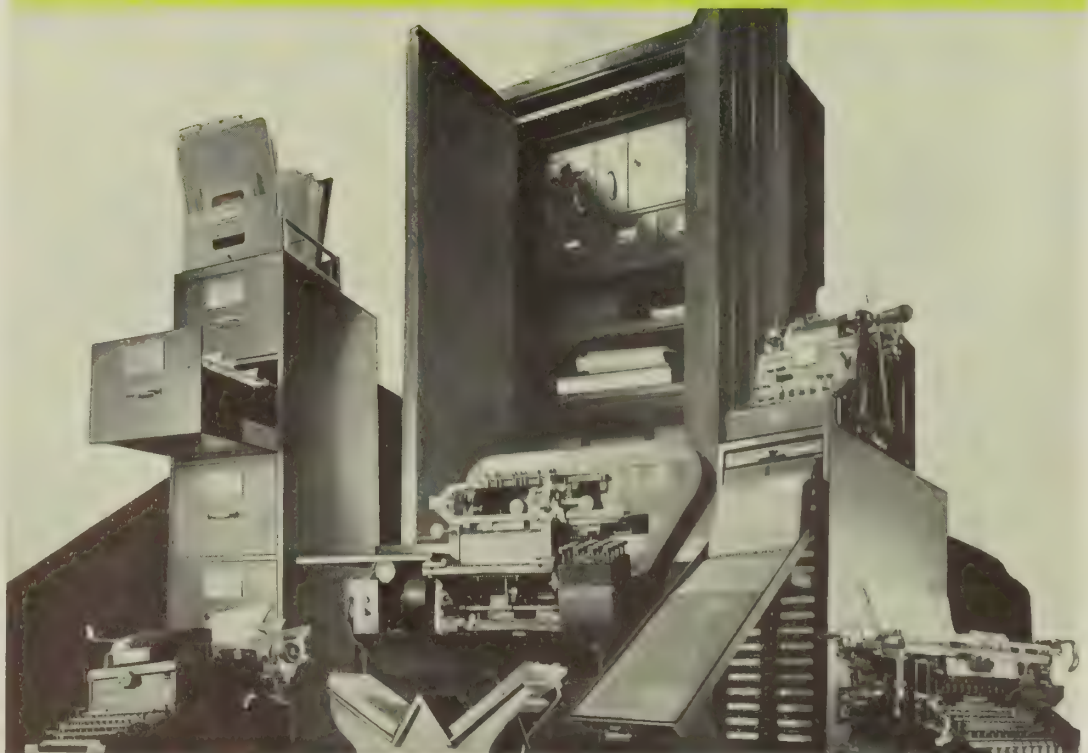
LIBRARY BUREAU Filing Systems and Indexing
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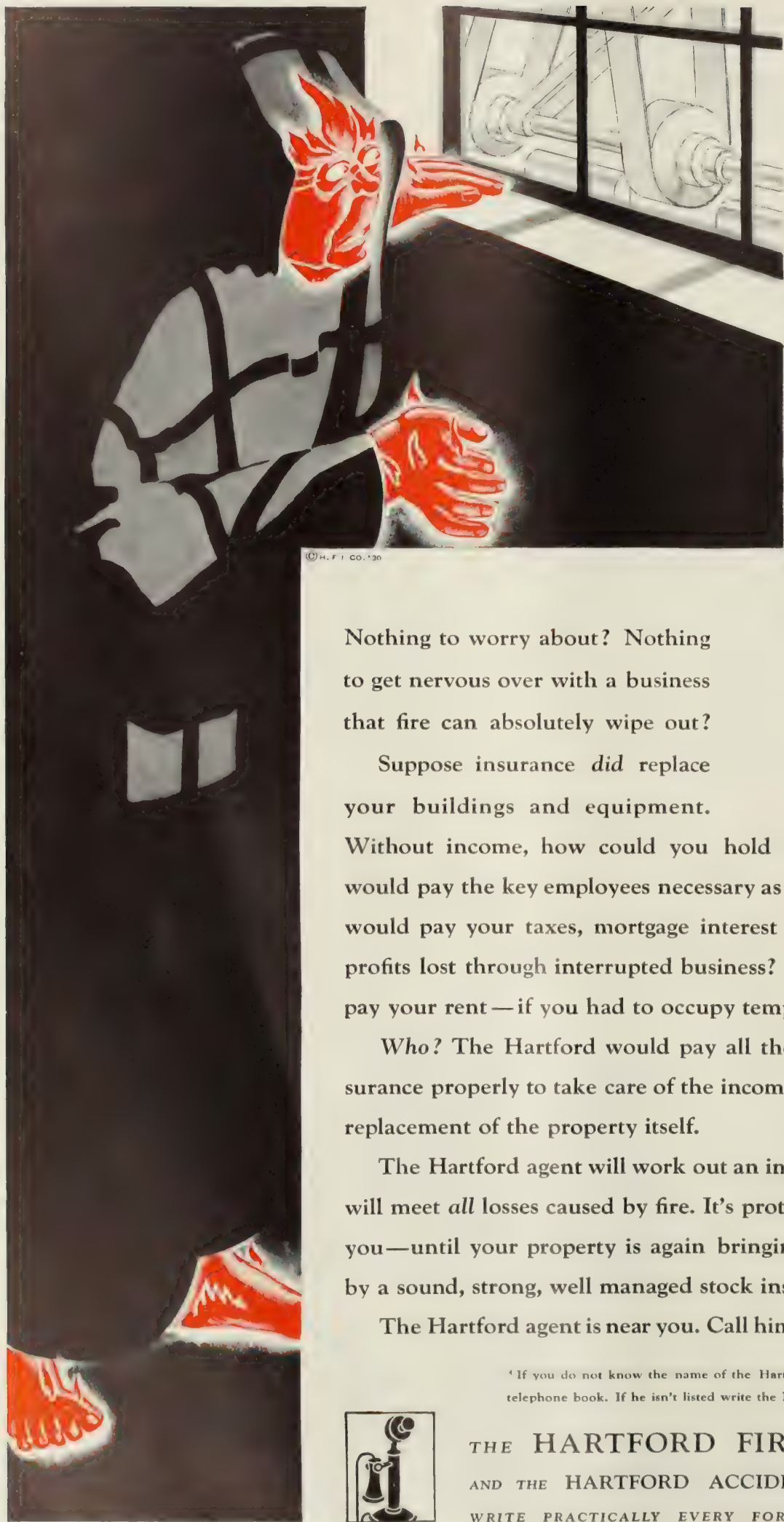


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THE HARTFORD FIRE INSURANCE CO.
AND THE HARTFORD ACCIDENT AND INDEMNITY CO.
WRITE PRACTICALLY EVERY FORM OF INSURANCE EXCEPT LIFE



A Bourgeois Engine

[Continued from page 65]

time. Mass production is not yet part of the Diesel vocabulary. Meanwhile, however, Diesels are playing a big part in supplementing steam and water power in our electric plants. It is estimated that half the 1,300 municipal power plants in the United States use Diesel power wholly or in part.

Stationary and semi-stationary direct power

Under this heading come several miscellaneous but noteworthy uses of the Diesel. Pumping is one of the most important. Practically all of the 100,000 miles of pipe lines in the country are equipped with Diesel pumps to urge the oil along on its way. This is logical because oil may frequently cost the companies as little as two or three cents a gallon, while the complete elimination of fire hazard is vital in the handling of oil. There are also many Diesel-propelled pumps in irrigation districts.

An increasing field for Diesel engines is found in excavating shovels, where the fuel saving over inefficient steam engines is sufficient to reduce operating costs as much as 40 per cent, and over gasoline power as much as 60 per cent. When a shovel strikes bedrock, however, it needs both power and low speed. Hence electric drive is often resorted to.

Aircraft

When we get into the air with the Diesel, we enter on the engine's potentialities rather than its actualities. Most exciting potentialities, however. The Diesel engine promises to promote safety and economy in an industry that has great need of both. Safety from fire is assured by the use of a fuel that will not burn or explode at the temperature of the exhaust pipes and the cylinder heads. Another aviation hazard, stalled motors, is practically eliminated by the Diesel, which has no ignition to get out of order and which can be stopped only by cutting off its fuel. As for economy, it is claimed that Diesel motors will not only use cheaper fuel but that they will go farther on the same bulk. One evidence of Diesel potentialities in aviation is that many large Diesel manufacturers are experimenting with an engine for aircraft. The two most promising developments up to the present time,

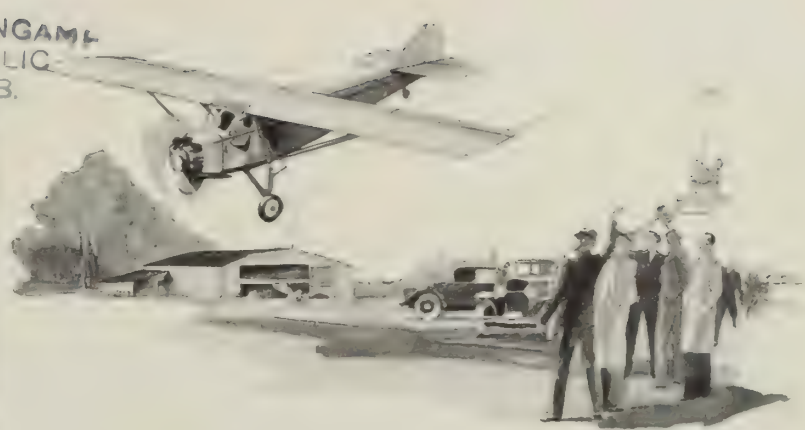
however, have not come from the regular Diesel manufacturers.

Pratt & Whitney, noted builders of airplane engines, have announced successful tests of a semi-Diesel motor. It has the low pressure and electric ignition of gasoline motors, and yet it will burn fuel oil. The secret lies in a device patented by Stephen A. Hasbrouck, Pratt & Whitney engineer, which secures more accurate delivery of the fuel to the cylinders and more perfect atomization after it gets there. This motor is as yet somewhat of an embryo, however. The first full-fledged Diesel engine for aircraft made its appearance at the Detroit Air Show this April. Designed by the late Captain L. M. Woolson of the Packard engineering staff, it weighs 510 pounds as against 480 pounds for the same horsepower (225) gasoline engine, and costs \$4,025, as against \$3,900 for a good gas engine. Its advantages in the line of safety, economy, and dependability would seem to surpass even the expectations of Diesel enthusiasts. *Safety*: it uses fuel that will not catch fire from an open flame, that will actually put out a fire when poured over it. *Dependability*: it will fly upside down as well as right side up; it will start readily in weather ten degrees below zero; it automatically adjusts itself to changes in altitude, so that the pilot need not worry about his mixture being too "lean" or too "rich"; a pilot has shut it off at 5,000 feet, has dived to within 50 feet of the ground, and has restarted it instantly with full power. *Economy*: in a test, it flew from Detroit to Miami, consuming \$8.50 worth of fuel oil as against the \$32 worth of



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"and the dealers turn out"

Sales meetings are easy to organize when executives arrive by plane



DISTRICT sales meetings were an old story to dealers of a certain large manufacturing company in the mid-west. Try as the company officials would, they experienced difficulty in bringing together groups of dealers by any of the usual methods.

"This situation has been radically changed," says the sales manager, "since we purchased a Ryan and our officials travel by plane. Now we simply advise a distributor in advance that a district sales meeting will be held on a certain date and the dealers turn out — assemble at the flying field to meet us." In this way, a personal relation-

ship has been established between the company officials and the men in the field which has resulted in greater dealer goodwill and in turn, increased sales.

With a Ryan, executives are able to contact a nation-wide organization with ease—to meet frequently important business associates who formerly could be seen only once every so often. And by saving valuable time on business trips, a Ryan adds more working days to every year.

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Fresh . . . pungent . . . this sparkling crystalline formula serves half a dozen different daily needs: body freshener, toilet water, after-shaving lotion—all in one! . . . A formula so unique, so different, so versatile that there is no one descriptive title we can give it . . . except the title by which two continents have known it since Napoleon III. held the throne of France: PINAUD'S LILAC . . . Perfected nearly seventy years ago by one of the great parfumeurs of the world . . . blended now, as then, with essences compounded in Pinaud's Paris laboratories . . . May we suggest that there should always be a bottle of Pinaud's Lilac (Lilas de France) near your shower—and in your bag?

Pinaud

PARIS • NEW YORK

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gasoline that would ordinarily have been consumed on the trip. With selling points of such calibre as these, it is not surprising that the Packard aircraft-engine factory is operating at its full capacity and that Packard Diesels are now optional equipment on Ford trimotored planes.

Locomotives

When Westinghouse delivered Locomotive 9000 to the Canadian National Railways, the reverberations spread through the press of the country. A test was made, with sensational results. Canadian National 9000 hauled a train from Montreal to Toronto for \$25 in fuel, as against \$80 for a steam engine on the train ahead. Performance was perfect. This electric locomotive, which generated its own power with Diesel engines, was going to open a new era of railroading. And yet no such locomotives are now being built, and there is a strange dearth of reports on Canadian National 9000 and its progress. There would seem to be difficulties still to be overcome.

On railroads, as at sea, the giant turbine and its superpower is the chief Diesel rival. Where traffic density is heavy, overhead lines carrying electricity from superpower plants are more logical sources of power than individual Diesels installed on each engine. The Diesel electric locomotive today is chiefly useful to industrial companies for switching and short hauling. Operating over a comparatively narrow speed range, to which it has proved feasible to adapt electric transmission, it is rendering good service. The New York Central recently ordered thirty-five of the Ingersoll Rand-General Electric type. The future of Diesel power for locomotives depends largely on the progress of engineering in solving transmission problems.

Automobiles

Entering the automotive field in our survey of Diesel uses is passing from the potential to the improbable. Fuel measurement has already been indicated as the great bar to the Diesel's stepping down into the proletariat of motors under 100 horsepower. A six-cylinder Diesel motor delivering 35 horsepower to drive a car 25 m.p.h. must separate a gallon of fuel into 70,000 parts (for lower speeds separation must be even greater). These tiny specks of oil must one by one be injected at the rate of 3,000 a minute into a cylinder against a pres-

sure of from 500 to 1,000 pounds. As it now exists, the Diesel engine will not perform these miracles. Its measuring problem makes it too inflexible an engine for automobiles, and is a decided draw-back in aviation as well. Automobile engines must have a wide and instantly controlled range of speed. They must slow down to fifty revolutions per minute to change gears, and then accelerate in no time at all to as much as 3,600 r.p.m. The Diesel, as it exists at present, is too sluggish to perform these gyrations.

Engineers may some day perform the miracle of adapting the Diesel to automobiles. An eminent automotive engineer, Louis Coatalen, chief engineer of the Sunbeam Motor Car Co., predicts that his new Diesel engine will soon be running the world's automobiles. One may be allowed a grain of scepticism. Such a change would destroy a great Diesel selling point: cheaper fuel. Fuel oil is cheap because it is a by-product of gasoline, just as gasoline was once cheap as a by-product of kerosene. A balance between the cost of fuel oil and of gasoline would probably result from the Dieselization of the automotive world. There is also a natural objection to the scrapping of large investments that such a change would entail in both the oil and the automobile industries. Economically, the outlook for the Diesel in this field must be regarded as distinctly unpromising.

Bourgeois Brutus

Our survey has revealed an engine that is bourgeois to the last. Its steady, dependable efficiency is a bourgeois virtue, as is its hatred of waste. And, like all bourgeois, it is in the end undone by its own virtue. The ancient Brutus was no more inflexibly moral than is the Diesel. With bourgeois stubbornness it resists the jazzing up that is the weakness of the age. Conservatively, it refuses to climb the giddy heights of mass power production to which the turbines have insanely soared. Stolidly, it scorns the neurotic flightiness of the gasoline engine. The dynamic pace of the age rewards its solid virtues only with the third place in the power world. Yet the Diesel commands the respect that merit always compels, and in its bourgeois way it probably prefers such respect to the enthusiasm that its more sensational rivals arouse. It plods stoutly throughout the United States and abroad, behind the turbine and the gasoline motor, an admirable if somewhat unimaginative prime mover.



DIGGING FOR FACTS

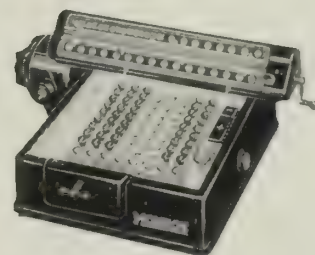
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of the world's nitrogen fixation (including Allied's) is now carried on. The Haber-Bosch process does not (of course) manufacture nitrogen, but it does manufacture a solution of ammonia, which is one part nitrogen to three parts hydrogen. These gases do not unite at ordinary conditions, but the Haber-Bosch process subjects them to very extraordinary conditions indeed. In one variation of the process, they are heated to a temperature of from 500 to 600 centigrade (five to six times the heat at which water boils) and put under a pressure of 200 atmospheres (or about 3,000 pounds to the square inch), and under these conditions and in the presence of a catalyst (iron to which small amounts of aluminum and potassium oxides have been added) they do unite to form ammonia. From ammonia it is simple to make nitric acid for war use or either sulphate of ammonia or sodium nitrate for fertilizing use. Results of the Haber-Bosch process are best seen in the collapse of the Chile nitrate monopoly. Chilean producers, after a losing effort at fighting the synthetic competition (an effort resulting in the price collapse of 1926-27), finally conceded the superiority of art over nature and made a price-fixing agreement with the German producers. In 1928 Germany pro-

Allied Chemical & Dye

[Continued from page 83]

duced 740,000 tons of fixed nitrogen; America produced 184,300 tons and Chile 429,800 tons of the natural product. Now it appears to be possible that the Chilean government will cut its tax on nitrate export by \$12.50 a ton, thus allowing the country's producers to undersell both I. G. Farbenindustrie and Hopewell. It is not yet clear, however, how Chile will then balance its budget.

Allied's fixation plant at Hopewell, which went into production in 1928, is reported (by the *Journal of Commerce*) to have a capacity of 350 tons a day. The 1930 units are still under construction; when the entire program is completed, an annual capacity is forecast of from 350,000 to 400,000 tons of nitrogen. This compares with the German production of 750,000 tons. It is inconceivable that Allied, staking so large an investment in Hopewell, should be unwilling to meet both the present Chilean threat and the potential competition of the large German capacity. The issue, after all, will depend upon production costs. Certainly I. G.

Farbenindustrie no longer disregards Allied products in the world market. And it must be said that if the United States *does* take over an industry as firmly entrenched across the water as the production of synthetic nitrogen, Allied will have offered a notable service to the country.

Allied faces

Thus far our personal approach to the Allied Chemical & Dye Corp. has been solely through its reticent president. There are, of course, other familiar faces in the Allied scene. Since even chemical companies do not combine without some merging mind acting as a catalytic agent and since Allied came into existence as a merger of five large chemical companies, the next step in the process of untangling Allied's personalities must deal with its origin. From one point of view, the Allied birth is simply enough described. The late Dr. William H. Nichols, who in 1920 headed the General Chemical Co., is usually credited with having in-

spired the merging of General Chemical, National Aniline & Chemical, Barrett, Solvay Process, and Semet-Solvay companies into a well-rounded American chemical organization dominating the strictly chemical field and making American chemistry proof against foreign competition. (Atmospheric Nitrogen was later created by the group.) Certainly the revered Dr. Nichols must have played a large part in the formation of Allied, since he was Allied's chairman from the formation of the company to his death in 1930.

Thus Dr. Nichols, but the merger also brought into the new American company a personality—or rather set of personalities—which may be crystallized out of the Allied solution. To reach them it is necessary to travel across the Atlantic, for although they are a cosmopolitan and world-wandering family, the Solvays are native to Belgium. And their connection with Allied becomes sufficiently obvious upon remembering that the Solvay Process and the Semet-Solvay companies are two vital links in the Allied chain.

The Solvay family (which is an old family with a great many members) has a household wealth of possibly a quarter of a billion dollars, large for Europe. The founda-

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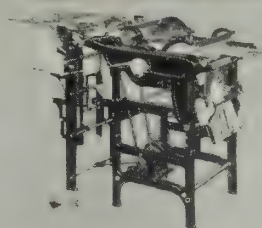
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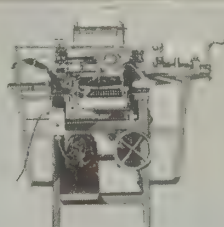


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GLEN
SPRINGS

THE AMERICAN NAUHEIM

Allied Chemical & Dye

[Continued from page 130]

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tion of the fortune was laid in 1863 when Ernest Solvay and Alfred Solvay worked out the Solvay process. Not to be technical, the Solvay process is a method of manufacturing soda ash from salt, ammonia, and limestone and is far superior to the Le Blanc process previously used. As soda ash and the caustic soda, which is made from it, are basic chemicals in many industries (especially glass and soap making) the Solvays rapidly spread their process throughout the world. One of their first associates in it was the Brunner, Mond & Company, Ltd. (now controlled by Imperial Chemical Industries) of England. In 1881, Mr. W. B. Cogswell, with the help of the ancient Rhode Island family of Hazzards, proceeded to form the American Solvay Process Co., and the European Solvays held therein approximately a half interest. When the Solvay Process Co. went into Allied, the family received in return a block of about 350,000 shares of Allied stock. Recently Brunner, Mond sold its block of 100,000 shares to the Solvay American Investment Co. at the low price of \$220 a share. It may be noted in passing that the half interest in the Solvay Process Co., which in 1920 was worth (in Allied shares, at \$40 a share) \$14,000,000, after a decade of Allied management is now worth about \$110,000,000. The Semet-Solvay Company, a later Solvay development (the Solvays were pioneers in the recovery of coal and coke by-products), came into the Allied group along with its older brother. In addition to their holdings in Allied, the Solvay interests were long represented by the late Armand Solvay, who was an Allied director, in much the same manner that Ernest Solvay II is a director in Imperial Chemical Industries. Another active member of the contemporary Solvay group is said to be Baron Jannssen, who is a Solvay only by marriage. It is impossible to say how much either of the native Solvay companies make, because, like Allied, they do not wear their hearts upon their sleeves and also because, as limited liability companies, they need divulge hardly anything about their operations. Because of their extensive French, German, and British affiliations the Solvays occupy a key position in any movement toward a general European chemical cartel, a position which they strengthened in 1927 by promoting the

formation of the Union Chimique Belge, an association of Belgian chemical companies, dominated by the Solvay influence. It should be pointed out that Allied and the Solvays are in no sense subsidiaries of each other and that while they are affiliates across the sea, each moves its own way in its own sphere of influence.

These, then, were the major figures of the 1920 deal—Dr. Nichols, the Solvays, the Hazzards, and Mr. Weber himself. But it is impossible to conclude a tour of the Allied gallery without a glance at a man who is no director, no officer of Allied, who is yet a large stockholder, who has been Mr. Weber's close friend for fifteen years, who is popularly and mistakenly considered a potent force in Allied councils today. This is Mr. Eugene Meyer.

Man Who Looked Around

In 1916, Mr. Weber found himself active vice president of Maxwell Motors, and among Maxwell directors at that time was Mr. Eugene Meyer. It was doubtless through his association with Mr. Meyer that Mr. Weber left a somewhat stricken automotive field (the Maxwell disappeared in 1925 with the Chrysler rising from its ashes) and went into chemicals and dyes. In 1917 (War year), the National Aniline & Chemical Co. was organized to manufacture dyestuffs, Mr. Meyer was financially interested, and Mr. Weber became its president, and when in 1920 National Aniline went into the merger that produced Allied Chemical & Dye (of which Mr. Meyer is a large individual stockholder), Mr. Weber exchanged the presidency of National Aniline for the presidency of Allied, an office which he occupies today. The shift from motors to chemicals appears to have been the turning point in Mr. Weber's career, and about the same time Mr. Meyer's life underwent a change, for he removed to Washington, became Chief of the War Finance Corp., and renounced active business.

Mr. Meyer is perhaps best described as an investor, and as such he is a model of his kind. Many years ago, when statisticians were less numerous and corporations less analyzed than they are today, Mr. Meyer conducted one of the first thorough investment researches



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CARL M.
SNYDER



MANAGING
DIRECTOR

Allied Chemical & Dye

[Continued from page 132]

into the U. S. Steel Corp., reached the (extremely sound) conclusion that U. S. Steel was an excellent purchase, and became bullish on Steel ten years before the World War had offered a general demonstration of the wisdom of his course. Tips, hunches, and "inside" information are never allowed to influence his decision. Mr. Meyer entered the commercial world with the advantage of having money (he is a member of a wealthy French family whose sons are likely to become either rabbis or bankers) and has undoubtedly many times multiplied his initial stake. Asked how one made money, he said: "Oh, you just go to New York and take an interest in things," and asked how one knew what things to take an interest in he answered, "Oh, you just look around." Which, if not very convincing, is at least as good as the story about saving one's pennies and working early and late.

Possibly Mr. Meyer's vagueness concerning the road to riches results from his being as much interested in politics as in finance. He was a leading candidate both for the chairmanship of the Federal Farm Board (awarded to Alexander Legge) and for the position of Ambassador to Germany (awarded to Frederic Moseley Sackett), and his unusual balance of brilliance with sanity would have resulted in his adding distinction to either office. During the War, however, as head of the War Finance Cor-

poration, he loaned to farmers some \$600,000,000 of government money and got it all back again. Since farmers then (as now) were inclined to visualize Washington as a fairy godmother, they considered Mr. Meyer's insistence upon collecting his advances extremely ungracious, and also resented his unwillingness to lend money to farm organizations which offered no security. He therefore became unpopular in many portions of the farm belt, and his availability was further lessened by his being a Jew, a New Yorker, and a financier.

Mr. Meyer lives in Washington on Meridian Hill, near Sixteenth Street (which is the haunt of the Embassies), in a huge house overlooking the city—a house with a lordly gateway, a sweep of drive, and large formal rooms furnished with some Chinese things (Mrs. Meyer is an authority on Chinese art), some formal salon type things, and some comfortable American things, but all things in excellent taste and accord. The Meyers are the only people in Washington (since the comparative social retirement of the McLean family) who entertain in the grand manner, with a flair. Most Washington dances assemble nothing more ambitious than a five-piece band, a hundred people, scrambled eggs and coffee. The Meyers entertain guests with English singers, Russian singers, Libby Holman of the *Little Show*, and many a dancer.

PICKANDS, MATHER & CO.

A note on the figures printed on page 69

It developed when taking subsequent depositions that Pickands, Mather's actual compensation was somewhat less than 1 per cent of the gross sum quoted by Mr. Eaton. Pickands, Mather testified that its total compensation from Sheet & Tube in 1929 was \$165,948.75.

CHANGES of ADDRESS

Notice of a change of address, to be effective with the July issue of FORTUNE, must reach the Subscription Department prior to June 10th.

The Post Office does not forward magazines, including FORTUNE, which are mailed under the Second Class Rate of Postage.

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CANTON	KALAMAZOO	ST. PAUL
CHICAGO	KANSAS CITY	SAN ANTONIO
CINCINNATI	LOS ANGELES	SAN FRANCISCO
CLEVELAND	LOUISVILLE	SEATTLE
COLUMBUS	MEMPHIS	TAMPA
DALLAS	MIAMI	TOLEDO
DAVENPORT	MILWAUKEE	TULSA
DAYTON	MINNEAPOLIS	WACO
DENVER	NEW ORLEANS	WASHINGTON
DETROIT	NEW YORK	WHEELING
ERIE	OMAHA	WILMINGTON, DE.
FORT WAYNE	PHILADELPHIA	WINSTON-SALEM
FORT WORTH	PITTSBURGH	YOUNGSTOWN

The Month's News

Focused attention upon these faces, these facts, these events, and these places.



International

THE Kentucky Derby is a horseshoe magnet which attracts every year to Churchill Downs an imposing array of the aristocracy, social and industrial, of the country. At such a gathering one may see Marshall Field or John Hertz, Ogden Mills or one of the Fisher brothers, Benjamin Block or H. P. Whitney. William du Pont might be there (for he has recently taken to owning horses) as might Mrs. John J. Raskob, whose interest in racing is greater than her husband's. Last year among those who got rain-soaked at the Derby were Publishers Ralph Pulitzer and Joseph Medill Patterson, Editor Herbert Bayard Swope, Financier John J. Raskob, Realtor Walter J. Salmon, and Mrs. Graham Fair Vanderbilt. This year there was a most distinguished spectator sitting in the box of Joseph E. Widener. He appears above, surrounded by Bobbies, in his Hour of Triumph. In 1918 Edward George Villiers Stanley, seventeenth Earl of Derby, announced two life ambitions: one was to become Prime Minister, the other to win the Epsom Derby. His horse, *Sansovino*, accomplished the latter for him in 1924, and our picture shows him on his way to lead *Sansovino* into the paddock. It was the first time since 1787 that a Derby had won a Derby . . . Of the 149 thoroughbreds that were entered in this year's Kentucky Derby, certain bore the colors of men as

potent in business as in racing. William Woodward, president of the Hanover National Bank, led the list with no less than seven entries. Not far behind, with five entries, was Harry Sinclair's Rancocas Stables. The Three D's Stock Farm of W. T. Waggoner, blind Texas oil man, had three entries, and E. R. Bradley, proprietor of the famed Beach Club at Palm Beach (known generally as "Bradley's"), had two: *Breezing Thru* and *Buckeye Poet*. The names are significant: all Bradley horses are given names beginning with "B," as his *Behave Yourself*, the Derby winner in 1921, and his *Blue Larkspur*, the unsuccessful favorite last year. And there was the colorful Baron Long, California promoter and resort owner, with two entries. One of the owners of Agua Caliente, the sporting colony de luxe near Tia Juana, Mr. Long projects a \$1,500,000 race track there. William Ziegler, Jr., head of Royal Baking Powder, entered *Gone Away* and *Spinach*, and Patrick H. Joyce, the Chicago railroad man who recently got control of the Chicago Great Western, was represented by his *Dick O'Hara*. Walter J. Salmon (the Salmon Tower) had three entrants. The roll call, by no means complete, of Business in Horseflesh as represented at this year's Derby may be closed with Edward B. McLean, publisher of the *Washington Post*, who entered his *Crossbones*.



International
SENATOR CLARENCE DILL

RADIO Corporation of America proposed, last month, to purchase from General Electric and Westinghouse their radio manufacturing facilities and patents. Almost simultaneously with the public announcement of this proposal, Clarence C. Dill, Democratic Senator from Washington and at one time said to be the only man in the Senate who could take a radio set apart and put it together again, made a loud and bitter attack upon the parties to the bargain. Said he, "A new radio trust has been formed. I hope the Department of Justice will take notice . . . This merger would give General Electric the same control over radio that it already has over the power trust." On the following day, the deft Senator Dill was able to link the new radio set-up with the International Bank through G.E.'s chairman, Owen D. Young.

The details of the proposal include the issuance of 7,500,000 new shares of common—a number equivalent to the present authorized total. This new stock would be distributed between G.E. and Westinghouse, who are already stockholders in R. C. A. Reasons for the purchase were given as follows:

In 1919 a great many radio patents had been issued to G.E., to Westinghouse, to A. T. & T., and to others. So scattered were these patent holdings that no single company could manufacture complete sending and receiving equipment without infringing on the rights of others. G.E. acquired the Marconi company, and then in co-operation with Westinghouse created R. C. A. as a selling agency for radio equipment, using the devices jointly controlled by them. R. C. A. has been buying parts on a cost plus basis, selling parts or franchises to other manufacturers and sets to the public. In 1919 this set-up was not unsatisfactory because the industry was small, its potentialities un-

imagined. Now the industry, competition, and potentialities have grown so enormously that R. C. A. has begun to feel cabined in its limited capacity as selling agent and G.E. and Westinghouse believe that concentration of radio manufacturing and research interests is wise and likely to be more profitable than the set-up of the past decade. By this proposal, the interest which General Electric and Westinghouse have held in R. C. A. since its formation will change to an actual control of a majority of its stock.

WHEN a government needs money and has at its disposal a match monopoly, a bargain can usually be struck with Kreuger & Toll, parent company of Swedish Match and International Match. Many a nation has discovered this in the past few years. And among the first of them was France, in November, 1927.

At that time, French credit was shaky, and a large issue of 8 per cent government bonds was outstanding. To retire these bonds, France sought a money-lender. But no money-lender could be found who would do business at commercial rates. Kreuger & Toll volunteered to buy \$75,000,000 worth of twenty-year 5 per cent bonds at 93½ if the Republic would give in exchange a twenty-year match monopoly. Swedish Match took \$25,000,000. International Match, its American subsidiary, took \$50,000,000 worth, which it financed by means of a debenture issue sold through Lee, Higginson & Co. at 98½. France got the money and retired its 8 per cent bonds; Kreuger and Toll got the concession.

Now, France is back on her feet. The Chamber of Deputies has ratified an agreement with Kreuger & Toll to retire the issue on June 30, at 103½, plus interest.

France's gain by early retirement: approximately \$60,000,000 (interest for 17½ years, minus \$7,500,000 premium paid to Kreuger & Toll). Kreuger & Toll's gain by the entire transaction: (1) twenty-year monopoly, (2) refund of their original \$70,000,000 investment, (3) the \$7,500,000 premium.

Similar loans have been made to Poland, Greece, Hungary, Rumania, Germany . . .

Faces & Facts

BURLINGAME
PUBLIC
LIB.



International
THE LADY

SAN FRANCISCO was lately thrilled by the dazzling conjunction of a lady and a tower. The latter was the Royal Dutch Shell's new \$4,000,000 building, whose twenty-nine stories are lighted up at night by what is called the most brilliant array of floodlights (360 of them) on the Pacific Coast. The lady was Lady Deterding, once an *émigré* from revolutionary Russia, now the wife of the potent head of Shell Oil. Properly smiling and be-orchided, she raised the flag that officially announced the completion of the tower.

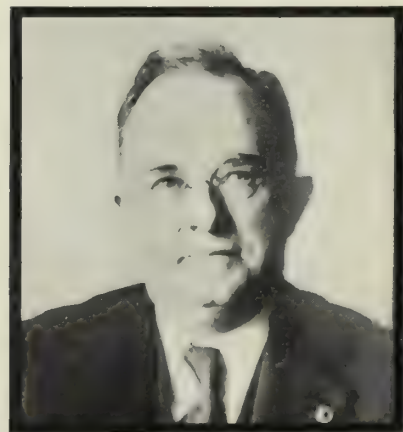


International
THE TOWER

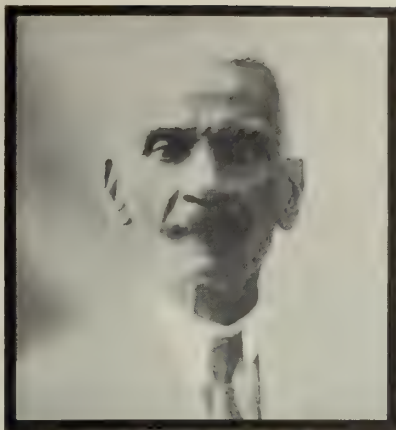


International
PRESIDENT CHANDLER

OF THE various shifts in executive personnel that went on during the month, these were most worthy of notice: the once-dilapidated, now flourishing Boston & Maine Railroad got a new president: Edward S. French. An experienced operating executive, he succeeds Thomas Nelson Perkins, who becomes board chairman . . . To the board of Niagara Hudson Power comes a notable addition: Landon K. Thorne, president of both Bonbright & Co. and American Superpower . . . Sir Percy Bates succeeded Sir Thomas Royden as chairman of the Cunard Line . . . Sikorsky Aviation elected a new chairman, A. C. Dickinson, succeeding Frederick B. Rentschler, and a new president, E. E. Wilson, succeeding Mr. Dickinson . . . Samuel Sloan, senior vice president of City Bank Farmers Trust, retired to resume his position on the board of National City . . . To Harry Chandler, publisher of the Los Angeles Times and eminent citizen of California, came a high and well-deserved honor: the 1930 presidency of the American Newspaper Publishers' Association . . . Republic Steel Corp. filled the vacancy caused by the death of its president, Elmer T. McCleary, by electing Chairman Tom M. Girdler president as well.



PRESIDENT FRENCH



International
ROY OF HAITI

AMERICAN men of business were well pleased at the outcome of recent presidential elections in Haiti and Colombia. Both countries have chosen presidents who are stable, progressive, and friendly to the United States.

Eugene Roy, a leading broker of Port-au-Prince and one-time president of the Government Clearing House, is Haiti's choice. When President Hoover's Commission left Haiti, they arranged for a regular Congress to be elected (the last one was dissolved by American marines in 1917) and for the Council of State to elect a provisional president for the interim. This important post has fallen to M. Roy, who seems to be equally respected by all parties. No politician, he has refused the Ministry of Finance five times, quietly keeping to his brokerage business through every political storm. His integrity and ability will do much to smooth out the workings of the Hoover Plan drawn up by W. Cameron Forbes [see *Fortune*, April, 1930] and his Commission...

Colombia's new president, Dr. Enrique Olaya Herrera, is noted alike for his progressiveness (he conducted a whirlwind campaign for the presidency, covering territory by airplane in six weeks that would have taken him three months by other means of travel) and for his American sympathies (for the last eight years he has been his country's Minister at Washington).

Since his election he has been traveling in the United States. "As long as I am President," he recently told a group of business leaders in New York, "I assure all foreign capital, and particularly American capital, fair treatment." That such words are not idle gestures was indicated by James S. Carson, of Electric Bond & Share Corp., who at the same luncheon accurately characterized Dr. Olaya as the first liberal to be elected President of Colombia in fifty years.

SAMUEL INSULL has been presented with a bill for \$64,119.42, the cost of losing his petition to the Public Service Commission of Indiana for permission to combine gas, water, electric power, heat, ice, bus, street railway, and interurban units serving 271 cities and towns in 38 counties of Indiana. A further bill for \$35.16 was rendered as the cost of publication of the legal notices.

These costs were incurred by the commission in investigations over a period of fifteen months. The investigations resulted in disagreement between the commissioners upon the question of jurisdiction in the case (two of the five maintaining that the commission did not have it) and complete accord in the opinion that the merger, a \$70,000,000 deal, should not be permitted. The reasons for rejection of the petition were "... that the earnings of the merged property will not adequately provide for operating expenses ... that the proposed merger is not in the public interest."

Simultaneously with the announcement of denial of the petition, two insolvency suits were filed by Westinghouse Electric and Manufacturing Co. against the Terre Haute Indianapolis & Eastern Traction Co. and the Indianapolis Street Railway Co. Because of Westinghouse-Insull friendship, this was considered as an Insull move and potentially a strong one toward eventual Insull victory in the fight over the project, already of five years duration.

Rumors to the effect that the new United Light & Power combine would surrender a controlling interest to Commonwealth & Southern were vigorously denied.

The day when New York City will begin to draw electric power from Niagara Falls generators seemed to be advanced last month by the announcement of acquisition of substantial interest in Consolidated Gas (which controls N. Y. Edison) by the Morgan-Bonbright holding company, the United Corporation.



Wall Street
HERRERA OF COLOMBIA



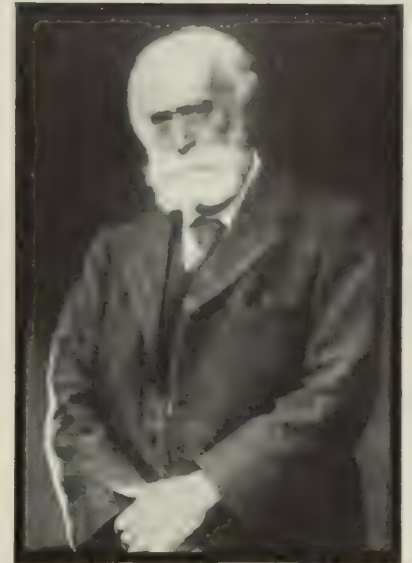
International
MR. SAMUEL INSULL

Organization of the Hellenic Company of Greece, the first public utility holding company in Greece, has been undertaken by the European Electric Corporation in conjunction with some of the largest banks in Greece. The new company will have an interest in the electric light and power properties serving Athens, which has a population today in excess of 600,000. European Electric has large utility holdings throughout the Continent.

Harris, Forbes-American Founder's Public Utility Holding Corporation of America has acquired controlling interest in the South American Railways Company. South American Railways is a Delaware corporation formed to finance and eventually to acquire substantial interest in the Buenos Aires Central Railroad and Terminal Co., which owns a 200-mile steam railroad, the Lacroze Tramways Co., and the Buenos Aires Lacroze Light and Power. It also has under construction a new terminal in the heart of Buenos Aires and new underground trackage which will lead to it.

Negotiations now under way between U. G. I. and Public Service Corp. of New Jersey are designed to create the largest electric lighting and gas combination in the world (total assets more than \$1,436,000,000). Three common shares of U. G. I. for one of Public Service of New Jersey is the basis upon which details of the deal are being worked out. Upon informal advice of the progress of negotiations, shares in both units became active and showed gains upon the Big Board.

THE freedom of the city of Manchester, England, has been conferred on one of her most distinguished citizens: Charles Prestwich Scott. Mr. Scott is the creator and guiding spirit of the revered, authoritative *Manchester Guardian*. He resigned as editor a year ago, after fifty-seven years in the post. But he still controls the *Guardian's* policies (through his son, quiet,



Keystone
CHARLES PRESTWICH SCOTT

Oxford-educated E. T. Scott, who is now editor) and the *Guardian* management (through his ownership of a majority of the capital stock). His eighty-two years weigh lightly on him. "I could still sack the lot of them!" he gloated when he retired. And to the Lord Mayor and the dignitaries of Manchester who met to do him honor, he suggested that it might be a good thing if Parliament met in Manchester for a while instead of London—in order, he explained, to get a broader viewpoint.

ON APRIL 26 appeared the first issue of a publication of interest first of all to Wall Street, but of considerable interest in these days to Main Street as well—the *New York Stock Exchange Bulletin*. Its twelve pages contained tables and graphs which outlined the course of securities during the last five years and evaluated them in general terms.

E. H. H. Simmons, retiring president of the New York Stock Exchange, contributed a signed statement of policy, explaining that the *Bulletin* would contain much information which had been issued to the press, but that some figures and charts would show the modification and correction that naturally come from monthly recapitulation.

Corporation Earnings

And comments thereon.

QUARTERLY reports of corporate earnings ordinarily come straggling in long after the close of the period they cover, especially when the reports are regrettable. As far as could be judged from fragmentary returns, however, American industry, during the first quarter of 1930, made profits of between 15 per cent and 20 per cent less than during the first quarter of 1929. The most extensive survey (issued by the National City Bank) covered 200 corporations and reached an average decline of 19 per cent. This survey excluded railroads (few of which had reported) and public utilities. This latter group, what with the stabilizing influence of American Telephone & Telegraph and the apparent ability of the light and power (as distinct from the traction and communication [aside from A. T. & T.]) companies, will probably serve to lessen the general average loss.

Automobile and automobile accessory companies were greatest first quarter losers, thirty-four companies showing a decline of more than 40 per cent. General Motors (world's champion earner) shrank from a 1929 total of \$61,910,000 to a 1930 total of \$44,968,000; Hudson profits dwindled by about one-half and Packard by about two-thirds. Motor profits declined for the eminently simple and sufficient reason that people were not buying automobiles, General Motors sales to dealers dropping off nearly 30 per cent. The automobile decline, of course, affected the even more basic steel industry, eighteen iron and steel companies falling off about 16 per cent. Bethlehem showed a small increase but U. S. Steel declined from \$42,185,000 to \$35,777,000. A dull period in textiles, motors, and coal mining and a cut in alcohol prices dropped the profits of twelve chemical companies about 20 per cent. Oil companies (not much concerned in the 1929 boom) held their losses to a 4 per cent decrease.

Of industries running counter to the general trend, the most conspicuous were the entertainment and advertising businesses. Whether people went to the theatres (notably the cinema theatres) to forget their troubles or whether economy manifested itself through the more major luxuries such as automobiles, entertainment companies reported large increases, Paramount showing a 1930 quarter of \$4,800,000 against a 1929 quarter of \$2,565,000. The advertising increase resulted partly from a deliberate attempt to preserve the general industrial morale, many a manufacturer maintaining or increasing his advertising appropriation to demonstrate that he was not down-hearted. Incidentally, brisk advertising business is shown not in the reports from advertising agencies, which are nearly all closed corporations with no Exchange listings, but in the earnings of printers and publishers. Thus chief evidence of advertising well being was seen in the Curtis Publishing quarter of \$6,533,000 against \$5,752,000 in 1929. The most basic industry among those prospering through the early months was the light and power business. Commonwealth Edison held its own around the \$5,000,000 mark and Commonwealth & Southern was about stationary around \$19,000,000. General Electric was off about \$500,000 and Westinghouse about \$1,000,000. The 200 companies considered by National City made \$293,330,000 in the first 1930 quarter against about \$362,000,000 in the first 1929 quarter, a decline of \$69,000,000, about 19 per cent.

It should of course be remembered (and it is constantly becoming more obvious) that 1929 was very much a record and not at all a normal period, so that comparisons with it, although inevitable, are certain to be invidious. It is likely enough, for example, that when 1930 has completed its allotted twelve months it will have been no year of disaster and calamity, although it can hardly hope to approach the records of its brilliant predecessor. It may be, judging from the apparent extent of unemployment, that many a smaller corporation whose earnings at best are never a matter of statistical concern has seen the 1930 profit shrinkage result in a wide gap between ends that should be made to meet. But the larger and more listed companies whose statements are ordinarily considered industrial barometers show rather a decline in a profit than an approach to a loss.

FIRST QUARTER EARNINGS OF SIXTY MAJOR COMPANIES

	1929	1930
Allis-Chalmers Mfg. Co.	1,013,375	1,170,937
American Telephone & Telegraph	40,500,765	40,439,855
Atchison, Topeka & Santa Fe Railway . .	12,250,175	4,884,856
Atlantic Coast Line Railroad	6,149,800	4,300,439
Atlantic Refining Co..	3,892,600	1,124,300
Baltimore & Ohio Railroad	9,221,571	6,805,218
Bethlehem Steel	9,045,590	10,077,486
Boston & Maine Railroad	1,331,081	1,178,552
Brazilian Traction, Light & Power . . .	6,584,554	6,657,946
Canadian Pacific	7,643,579	3,685,847
Caterpillar Tractor Company	2,197,495	3,365,832
Chesapeake & Ohio Railway Co.	6,819,046	6,618,251
Chicago & North Western Railway	3,030,383	2,258,229
Chicago, Rock Island & Pacific	1,884,162	293,756
Commonwealth Edison Co.	4,941,782	5,120,866
Corn Products Refining	3,435,404	3,152,343
Curtis Publishing Co.	5,752,491	6,533,142
Delaware, Lackawanna & Western	3,335,100	2,023,779
Electric Auto-Lite	3,399,084	1,930,504
Erie Railroad	2,142,839	313,872
Fox Film	3,090,470	4,604,684
General American Tank Car Corp.	1,012,550	1,703,917
General Electric Co.	14,505,986	15,042,522
General Foods Corp.	5,186,384	5,990,764
General Motors Corp.	61,910,987	44,968,587
Gillette Safety Razor Co.	4,531,218	2,164,348
Great Northern Railway Co.	3,554,168	538,325
Hershey Chocolate Corp.	2,265,140	2,320,818
Hudson Motor Car Co.	4,531,218	2,164,348
Illinois Central	7,298,581	5,357,191
Inland Steel Co.	3,007,242	4,098,424
Kresge (S. S.) Co.	3,177,981	2,759,000
Lambert Co.	2,325,641	2,068,267
Missouri Pacific	2,231,689	1,531,349
National Biscuit Company	4,709,455	4,665,616
New York Central Railroad	22,646,197	14,446,110
New York, New Haven & Hartford . . .	3,224,381	3,106,614
Norfolk & Western Railway Co.	7,874,120	7,303,964
Northern Pacific Railway Co.	3,365,679	1,126,856
Pennsylvania Railroad	27,521,482	19,406,721
Radio Keith Orpheum	384,749	1,607,622
Reading Co.	4,003,560	2,831,839
Seaboard Air Line Railway	3,011,153	2,361,233
Southern California Edison	3,905,921	4,085,186
Southern Pacific Co.	11,474,544	7,130,739
Southern Railway Co.	6,237,598	3,735,789
Stewart Warner	2,054,224	656,011
Tide Water Assoc. Oil	1,613,071	2,165,388
Timken Roller Bearing Company	4,264,225	3,106,659
Union Carbide	7,203,945	6,472,783
Union Pacific Railroad Co.	9,126,050	5,154,605
United States Steel	42,185,447	35,777,307
Western Union Telegraph Co.	3,714,360	1,486,803
Westinghouse Air Brake.	1,924,893	2,187,450
Westinghouse Electric & Mfg. Co.	5,631,700	4,546,613
Willys Overland Co.	2,028,020	136,443
Youngstown Sheet & Tube	4,430,316	2,516,706
Du Pont de Nemours, E. I.	25,239,845	17,347,626

The Bank of England Changes in Body and in Soul



Underwood & Underwood

BEHIND THIS PLACID FACADE . . .

THE Old Lady of Threadneedle Street is having things done to her interior. As Londoners pass by the Bank of England, they see the same chaste, classical façade (the top of which looms in the foreground of our picture) they and their fathers have always known. There is nothing to indicate that behind the Old Lady's placid visage all is chaos and confusion. Faced with the necessity for expansion, the British, characteristically conservative, are keeping the Bank's traditional façade intact, erecting within it a high central structure. And with characteristic thoroughness, they are making the Bank into an impregnable money fortress, with eight-ton doors and deep-buried vaults that can be flooded with water by pressing a button miles from London. Bombs, even high explosive shells, will have small chance of breaking into the Old Lady when the \$25,000,000 rebuilding is completed in 1935 . . . Spiritually as well as physically the Old Lady is changing. Montagu Collet Norman was recently reelected governor of the Bank of England. It was the tenth time he has broken one tradition: that the



Keystone

. . . THIS IS GOING ON



Keystone

governor shall not be reelected. It was the eleventh time he had defied another: that no banker shall be elected governor. Merchants, ironmaster, shipowners, but never bankers, were long considered fit for the highest banking post in England. Sophisticated, able Mr. Norman's flair for American financial relations has been a large factor in his tradition-shattering success . . . This summer Dr. O. M. W. Sprague, professor of banking and finance of Harvard, takes up his duties as economic advisor to the Bank of England. His function is largely to strengthen the ties between the Bank of England and the Federal Reserve System. Though certain British newspapers waxed indignant over the appointment of an American to this post [FORTUNE, March, 1930], the fact is that the policy is two years old and Dr. Sprague merely succeeds another American, W. W. Stewart. Between American-minded Governor Norman and American-born Dr. Sprague, however, the Old Lady is somewhat justified in feeling that her soul as well as her body is suffering a change.



P. & A.

AS THE NEW STRUCTURE LOOKS NOW



Keystone

AS IT WILL LOOK BY 1933. ABOVE: NEW DOORS



Wide World
SIR HENRY THORNTON

SIR HENRY THORNTON, the shrewd, highly successful, and capable American who runs the Canadian National Railways, talked over the telephone not long ago. This simple act was chronicled in newspaper headlines, not because Secretary of Commerce Lamont was at the other end of the line (though he was), but because Sir Henry was traveling over his railroad at about sixty miles per hour while he talked. The device, product of a Canadian National engineer, is being installed on the *International Limited* and the *Maple Leaf* on their Toronto-Montreal runs.

ON THE afternoon of April 23 there was a heavy snowstorm in the vicinity of the small town of Attica, New York. A section gang at work on the Attica & Arcade Railroad heard an airplane drone over their heads, heading eastward. A few minutes later they heard it again, much lower, going back in the opposite direction. Suddenly they heard a great crash . . . The designer of the Packard Diesel engine for aircraft, Captain L. M. Woolson, had been killed. And in a plane powered by his own motor. The crash, however, was caused entirely by weather conditions, the ship running into a hill in the blinding snowstorm. When the laborers rushed to the spot, they found Captain Woolson and his two companions crushed to death and the plane completely wrecked—but they found no fire. The elimination of the fire hazard (see page 127) is a feature of the Packard Diesel engine.

ON JUNE 9, the 500,000 shareholders of A. T. & T. will be issued warrants to buy one new share of stock at \$100 for each six shares which they now hold. A. T. & T. common was selling at the time of the announcement of the melon for about \$260. Rights, therefore, sold on a "when issued" basis at about \$24; the total of the melon was about \$300,000,000 if computed on the outstanding common only. If holders of convertible debentures issued in 1929 exercise their stock options by May 23, the value will be increased by many millions.

The purpose of the new issue is to provide additional funds for expansion of the world's largest public utility unit. Additions and repairs cost A. T. & T. approximately \$1,000,000 a day. The \$224,000,000 which the new issue will bring in will be devoted to such construction, particularly for the development in the current year of the company's long-line department. (Installation of 3,000 miles of cable, 1,000,000 loading coils, and 28,000 telephone repeaters are included in the announced program.)

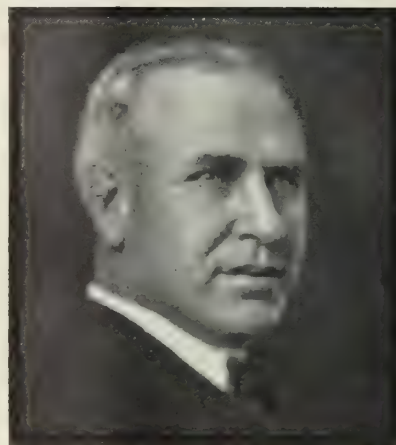
TEXTILES, in the South as in New England, have been sickly of late, and none knows it better than the Hon. O. Max Gardner, Governor of North Carolina (right), who made a fortune in the business (see page 71). Last month he summoned the governors and representative business men of six other southern states and organized the Southeastern Economic Conference. Its principal object will be general regional cooperation in business,



Camerasgrams
THE LATE CAPT. WOOLSON

industrial, and agricultural problems.

Governor Gardner, no Hoovercrat, was elected on the Democratic ticket in 1928 by a majority of 72,000. Election day was also his wedding anniversary and this coincidence received greater publicity in the South than did the fact



International
GOV. O. MAX GARDNER

that he is the first Chief Executive of North Carolina able to play golf, which he does left-handed.

BANKERS are the wet-nurses of industry. Arrogating to themselves more mature prerogatives, two of America's foremost bankers last month stood in the position of guide, philosopher, and friend and made the most important contributions of the month to the technique of business.

In a ponderous study titled *The Federal Reserve System*, Paul M. Warburg detailed its history and recommended changes in its constitution, tending to remove it from the reach of politics, to give it more power, and to make it more familiar with the financial affairs of the country.

Shortly after the appearance of Mr. Warburg's book, Bernard M. Baruch proposed to the Boston Chamber of Commerce the formation of a "Court of Business" which would stand in the same relation to business that the Supreme Court stands in relation to the nation. Under its direction business would not be controlled by "blind, inhibitory blankets" (such as the Sherman and Clayton acts) but by "a tribunal invested . . . with so much prestige and dignity that our greatest business leaders will be glad to divest themselves of all personal interest in business and there serve . . ."

Mr. Warburg's recommendations, applicable to a narrower field, seemed easier of realization than Mr. Baruch's which, however, were received hopefully.



WERNER JANSSEN

AN EMPLOYEE of the Guardian Trust Company, of Cleveland, has won the Prix de Rome in music. He is Werner Janssen, brilliant young composer of *New Year's Eve in New York*, and his victory means three years of study in the American Academy at Rome. Mr. Janssen does not romantically drudge as a bank clerk all day and write symphonies at night in his hall bedroom. He conducts the Guardian Trust Orchestra, which broadcasts over WTAM both the potency of the Guardian Trust and the genius of Mr. Janssen. He is probably the only graduate of such 100 per cent American institutions as Phillips Exeter Academy and Dartmouth College who likes caviar and pink shirts (Deems Taylor too likes pink shirts). He dislikes bridge, the sound of cotton being torn asunder, and people who play consecutive ninths on the piano.

RIGHTS to use the hydrogenation process of oil refining [see *FORTUNE*, April, 1930] will soon be made available to the American oil industry. These rights are jointly owned by Standard Oil of New Jersey and the I. G. Farbenindustrie through a subsidiary, the Standard I. G. Co.

To handle the details of licensing, Hydro Patents Co. has been organized under the laws of Delaware. Licensees will be required to own stock in Hydro Patents and to take a license measured by the licensee's daily hydrogenation capacity. Another subsidiary, Hydro Engineering & Chemical, has been organized to supply licensees with catalysts which it will manufacture, and to function as designing and construction engineer for the new plant equipment which licensees will require.

Current Styles

Among business men, speculators, securities, markets, and optimists.

(The following article was contributed to FORTUNE by Mr. Merryle Stanley Rukeyser.)

LIKE other places where human beings dwell, the world of finance is perpetually subject to a parade of changing fashions. Financial greatness comes not so much from inventing fashions as from interpreting public tastes and acting in accordance with them. Somber investment banking houses, recognizing the fashion element in their business, cut their security patterns differently each year in accordance with shifting vogues.

Styles not only affect such technical matters as capital set-ups, but also the industrial channels into which capital readily flows. Last year, for example, straight, limited return bonds were almost unmarketable. The creators and fashioners of bonds had to make a concession to the prevailing speculative excitement by adding warrants or convertible features to bonds, which gave them some of the promise of growth which common stocks held out. In the first quarter of this year, however, old-fashioned bonds were again in favor, and were in fact the chief medium for wooing surplus dollars from their owners. The revival of interest in bonds was closely related to the impulses which resulted in a return flight of funds into the savings banks. A public that had been somewhat disillusioned during the panic, before which they bought prospects and popularity at a high price, turned their backs on the new appeals and began to worship again at the feet of the goddess of safety. The financial cycles have the same human basis as the shifting from short to long skirts.

Industries, too, rise and fall in investment popularity, frequently without any correlation to their actual business prospects. For example, before and after the panic, power and light securities were in especial favor. The public suddenly became dramatically aware of their rapid and consistent growth. In seven years, the kilowatt hour output doubled, and Matthew S. Sloan, president of the National Electric Light Association, predicts another 100 per cent growth in the next seven years. But this growth factor has been well known to informed observers for many years. The great boom in the stocks depended less on the underlying facts than on the sudden awakening of the general financial public to the facts. And the public, responding to its feelings, is perpetually in the process of overdoing things in the world of give and take. Accordingly, T. B. Macaulay, president of the sagaciously managed Sun Life Assurance Company, the largest owners of common stocks in American corporations, whose favorite outlet for funds is in power and light securities, recently remarked to me that he was growing slightly apprehensive lest the public liked them too well.

A year or more ago, there was a fashion for airplane stocks. Of late, even the best aviation stocks have been listless, reflecting the fact that temporarily they have been out of vogue. Stock prices accordingly reflect not only mechanical earnings ratios and monetary conditions, as the sedate economic textbook writers indicate, but also popular whims, fancies, and caprice. The speculator, who is always seeking capital appreciation, usually seeks to acquire the temporarily unpopular just on the threshold of a new spurt of popularity. The long term investor, who buys mainly for income, should seek out the meritorious and the unpopular, for in that department he can find bargains. Good railroad stocks have recently been reflecting their outmoded characteristics at the market place, which has been far more sensitive to temporary shrinkage in earnings of railroads than of fashionable industrial companies.

The fashion note pervades the blue sky, or fraudulent, financial world as well. The charlatans have their ears close to the ground and are always seeking to find out what the public wants. The fakers closely follow bona fide financial developments and create a fake counterpart for each new legitimate development. In the six months before the panic, fraudulent operators were frustrated to a large extent by the growing quasi-sophistication of the financial public, which became enamoured of the idea that the prudent thing to do was to buy the blue chip stocks, such as General Electric, U. S. Steel, Westinghouse Electric and Manufacturing, and other premier issues. The blue sky stocks suffered from the competition of blue chips. Then came the interlude of disillusionment, popularly known as the panic. Amateurs found it possible to get wiped out even though they had hitched their wagon to the stars of the security world.

Accordingly, since the panic, there has been a renaissance of blue sky operations. The charlatans have revived their operations and their hopes. They have been capitalizing the failure of the amateur to distinguish in his own mind between losses resulting from legitimate hazards and the losses resulting from fraud. Accordingly, Dr. Frederick A. Cook, who was released from federal prison at Leavenworth, Kansas, where he had served for oil frauds in Texas, in a recent talkie told the great invisible audience that like it he had suffered heavy financial losses. This writer recalls that when an inquiring investor asked him more than eight years ago whether to entrust his hard-earned cash to the learned explorer, he replied in effect: "I would rather buy city lots in the North Pole from Dr. Cook than the oil stocks which he is sponsoring."

A specific instance of the manner in which questionable operators sought to benefit from the huge speculative losses incurred in so-called

good securities during the panic appeared in a circular sent out in behalf of an Oklahoma oil promotion. This enterprise called attention to the fact that doubtless the recipient's stock holdings had shrunk greatly in value, and it slyly indicated that the way to restore one's estate was to shift from miscellaneous seasoned stocks into the offering of the promoter.

Goldman Sachs's adventures in the creation of holding companies and investment trusts, which have caused so much comment, were doubtless stimulated by the decline of the commercial paper business, in which the firm had long specialized. Last year the commercial paper market became all but extinct. Under present conditions, with the marked decline in interest rates in the last six months, there has been a robust revival.

Professional low-brows of the business world have for months been sneering at the alleged Christian Science School of Economics. The allusion is doubtless to the sunshine conferences held at the White House by President Hoover with business executives during the critical November days, and the subsequent efforts of the resultant Business Survey Conference and other agencies to strike cheerful notes in their published comment. I am one of those who think that the engineer in the White House made a magnificent gesture to stem psychological panic and to demonstrate that the human will could be an effective contributing cause in shaping the course of the business cycle. The old-fashioned critics of the newer efforts to modify the cycle and to mitigate the recession phase are philosophically oriental fatalists who apparently believe that human beings are mere clay in the hands of fate, subject to uncontrollable economic forces which blindly shape their ends.

I do not agree with those who attempt to gild the lily. I think that an optimism which ignores statistics is plainly stupid. But critics of the hopeful school have been fallacious, too. They have overemphasized the significance of immediately visible adverse trade news, failing to allow for the fact that ahead of the recession phase of the cycle doubtless lies a period of reviving prosperity. As long as America continues to show long term growth in population and in wealth, depression must be regarded as only a step backward before three are taken forward.

Two irresistible forces assure the return of prosperity. First, the growth factor, which is technically called the secular trend, which reliable statisticians compute as $3\frac{1}{2}$ per cent a year. The long term normal advance in this country is at the rate of $3\frac{1}{2}$ per cent a year. That is why reasonably priced common stocks of well

managed companies in stable industries are attractive. The second factor is the tendency of consumption to go on without more than a 10 to 15 per cent dip even in periods of great depression. Accordingly, even though merchants temporarily stop reordering and the wheels of industry are retarded, consumption gradually reduces stocks on hand and creates the very conditions which inevitably bring a trade revival when it becomes necessary for dealers to replenish their stocks. Accordingly, the disposition of the hard-boiled school of economics to accept the black significance of economic indicators during a depression period without a sense of perspective is fundamentally more misleading than the old banking axiom that it pays to be a bull on America.

Incidentally, President Hoover's efforts to exert business leadership, which have resulted in a quickening of public works and an increase in public utility and railroad construction at a time when ordinary consumption was receding, is in line with the policy of the Committee on Recent Economic Changes, which functioned through the scientific National Bureau of Economic Research. Toward the end of the Coolidge-Mellon-Hoover period of prosperity, the Committee, on which leading business executives and economists were represented, outlined the new objective of business as follows: "To maintain the dynamic equilibrium of recent years is, indeed a problem of leadership which more and more demands deliberate public attention and control. Research and study, the orderly classification of knowledge, joined to increasing skill, well may make complete control of the economic system a possibility. The problems are many and difficult, but the degree of progress in recent years inspires us with high hopes."

Fate has lifted Gates W. McGarrah, one of the surviving silent men of Wall Street, into a post which will inevitably make him vocal. Mr. McGarrah, with sound, will be a new feature on the financial scene. As president of the new Bank for International Settlements, organized in Switzerland in accordance with the Young Plan, Mr. McGarrah will be in position to continue in organized form the new *rapprochement* among central banks which the late Benjamin Strong, as governor of the Federal Reserve Bank of New York, initiated informally and extralegally after the War.

Prior to 1914, international anarchy prevailed in banking. The effort to substitute human intelligence for historical accident in central bank policy was offset by the lack of a coordinated international policy. A maneuver in London could be completely nullified by a noncoöperative move in Paris or in Berlin. After the War, with New York the financial leader, Mr. Strong was eager to help the debtor countries return to the gold standard. Accordingly, he would meet occasionally with governors of important foreign central banks and secretly arrive at policies. That international coöperation constituted a new and significant civilizing force in world business, and the International Bank has become a logical medium for continuing this intangible effort to subject economic forces to human needs. For example,

the threatened future gold shortage, which has brought Professor Irving Fisher, of Yale, almost to tears, can be bereft of danger as a result of a coöperative move to modify central banking policy.

Mr. McGarrah's bank in Switzerland is owned by the other central banks, and will doubtless prove not only a clearing house for reparation funds but also for ideas and policies. Secretary Stimson ordered the Federal Reserve Bank of New York to abstain from active participation, but Mr. McGarrah, who had been chairman of the Federal Reserve Bank of New York, has been picked to head the venture. To the hitherto silent Gates McGarrah, who was head of the Mechanics & Metals National Bank, since absorbed by the Chase National Bank, this *bon mot* is ascribed: "It is in time of trouble that your real leaders stand out. When financial troubles come you can always count on a large percentage of timidity and selfishness, and experience will teach you where to find it; it is then that men of courage are needed to stand up and be counted."

The American people are especially subject to hysteria, and what touches its hysteria becomes first page stuff. The recent centers of hysteria were parrot fever and the plight of the automobile industry. As a matter of fact, since the recession the automobile industry has become better managed than ever before in its history. It is now attuning production to consumer demand and has deliberately given up its earlier dangerous policy of jamming cars into the showrooms of dealers. Accordingly, in the first quarter of 1930, the slump, as compared with the abnormally active first quarter of 1929 when the slack in connection with interrupted Ford production was still being made up, was much smaller in sales than in production. Actual sales in units were about 84 per cent as large as in the previous year.

In interpreting the larger significance of the trend, Alfred P. Sloan Jr., superlatively able business man and president of the General Motors Corporation, told me: "I am convinced that when the present industrial situation becomes a matter of history it will be found that from the standpoint of all the factors entering into what I might call 'stability' that the automobile industry will have earned for itself a high rating, a position which it is entitled to have in view of the fact that it deals with one of the most essential of necessities, transportation, and has become the most important American industry, therefore, the most important contributor to American prosperity."

Another bugaboo has been challenged. It was commonly asserted that consumer financing through installment sales was unsound and would collapse in the first period of extensive unemployment. The country has just been through such a test for the first time since installment selling on its present vast scale had developed. Though it is too early to discuss the experiment with the finality of an historian, I have been favorably impressed with the confidential experience data made available to me by executives of the principal finance companies.

Henry Ittelson, president of the Commercial Investment Trust Corporation, the largest finance company engaged in a diversified installment business, in chatting with me on this subject, said: "Judging from present indications, I have no doubt that when the period of business recession is ended, the test will have proven highly satisfactory, and that installment selling will have proved itself beyond further question, basically sound."

"Our own experience to date is a testimonial to the honesty and integrity of the American people. Obligations have been met during the time of stress in a highly satisfactory manner. In fact our present portfolio shows very little variation from the normal amount of past due items . . . I believe that the test of the present unemployment situation will prove to be just as satisfactory as have those through which we have already passed in twenty-two years of our existence."

M. S. R.

WORLD-WIDE deflation of commodities is no new thing to a world periodically heaving in the throes of business cycles, but new aspects have been present in the current decline. Most spectacular of all the breaks was that which dropped copper down 22 per cent after Copper Exporters, Inc., had bravely held it at eighteen cents for two days less than a year. Even at fourteen cents, buyers protestingly refused to purchase, and hinted that perhaps at twelve cents they would talk business. Then, with none of the cocksureness that had marked their previous move, Copper Exporters set the price at thirteen cents.

In agricultural commodities the results have been the same, and it indeed appears that the Federal Farm Board chose an inauspicious year to start the complicated mechanism of stabilization. Wheat has gone through an almost steady decline, with some options breaking the magic level of one dollar. Cotton has gone through a much more remarkable movement (see page 70), reflecting a most unusual policy on the part of the Farm Board, and one that has infuriated many members of the Cotton Exchange. While in Washington the government was denouncing manipulators and while the Senate was considering legislation against futures trading, the Board apparently engineered one of the most drastic squeezes seen for years on the cotton market. When cotton was below the Board's lending price of sixteen cents, it took over all the contracts for May and July deliveries that its coöperatives held and concentrated them in the hands of Harris & Vose. Then, instead of shifting to later months, it showed that delivery was expected. Merchants and mills who had gone short to hedge, individual speculators too, remembered the old refrain of the wheat pit, "He who sells what isn't his'n must pay the price or go to prison." The price was a premium of about three cents over later months, and at one point it would almost have paid to buy cotton in Liverpool and ship it back for delivery. While this move will probably recoup the enormous losses of the coöperatives, it has done much to embitter business men against the Board and little to please the farmers who plead for stabilization, not manipulation.



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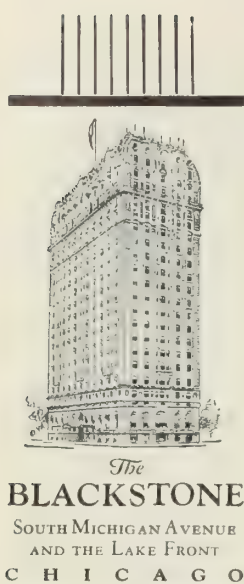
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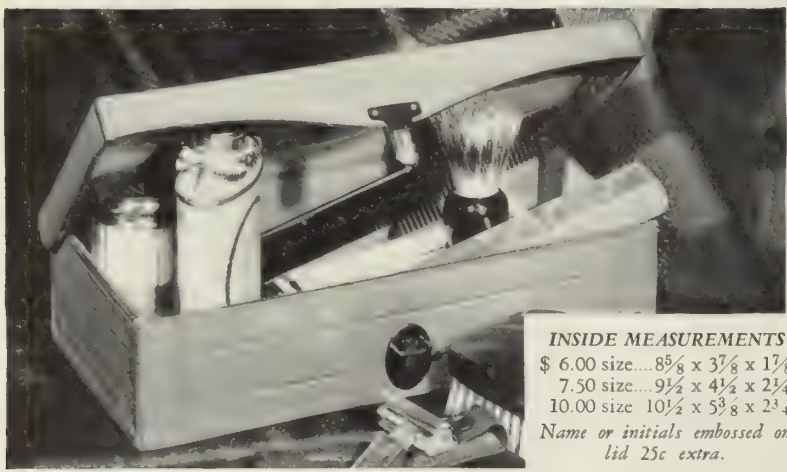
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Appendix

Note on the Navy

In spite of the very frequent and vocal attacks of certain well-organized groups on the Navy, there is reason to believe that the bulk of the people sense its great utility. After the Geneva conference of 1927, a program was proposed to lay down 25 new cruisers and 46 other combatant vessels. At that time a careful analysis of American press comment gave the following indication of sentiment pro and con the shipbuilding program:

	CIRCULATION		RATIO For: Against
	For	Against	
December, 1927	8,958,608	2,292,994	3.5 to 1
January, 1928	8,584,596	3,840,929	2.2 to 1
February, 1928	7,833,615	3,611,047	2.1 to 1
TOTAL	25,376,819	9,744,970	2.6 to 1

The drop from 3.5 to 1 in December to little more than 2 to 1 is attributed to the disaster of the submarine S-4, which introduced that emotional element which never fails to appear where any question of public policy is concerned. Probably as a result of the S-4 disaster, the program was cut down to 15 new cruisers and one aircraft carrier. The press reaction on this program in March, 1928, was:

	CIRCULATION		RATIO For: Against	BURLINGAME PUBLIC LIB.
	For	Against		
	9,205,971	1,573,344	5.8 to 1	

In view of this it is interesting to note that the vote in the House was 287 to 58 in favor of the building program—in other words, about 5 to 1. The program was not acted on by the Senate until February of the following year, eleven months later. During that time the Senators had ample opportunity to appraise public sentiment. If the press support had been specious or forced, that period of time would surely have revealed its weakness. But during the months preceding senatorial action the press stood better than 6 to 1 for the bill. It was not surprising, therefore, that the Senate passed the bill by a vote of 68 to 12, or virtually 5 to 1. The foregoing seems to show that the public is alive to its changing economic position and to the need for an adequate Navy which this entails. The statesmen who have blocked such a Navy, on the other hand, seem to have been impressed by a minority which, however well organized, represents neither the true policy nor the true feelings of the country.

Note on Cotton

For more facts, one may well read *Cotton*, by W. H. Johnson, complete, up-to-date, world-embrasive. Another source of cotton-lore is *Cotton*, by H. B. Brown, easier to read than Johnson's book, less informative. In *Cotton*, by George Bigwood, one may cruise gently from cotton mythology to textile mills, garner few facts but a comprehensive picture. A handbook of cotton statistics published by the Shepperson Publishing Co. is necessarily dry but indispensable.

Note on Chemical Companies

Of the six largest chemical companies in the world, Solvay & Cie, Belgian family corporation, publishes no financial statements. The five others, ranked according to earnings, stood as follows:

	1929	1928
E. I. du Pont de Nemours* (United States)	\$78,171,730	\$64,097,798
Union Carbide & Carbon (United States)	35,427,024	30,577,383
Allied Chemical & Dye (United States)	30,198,523	26,962,442
Imperial Chemicals (Great Britain)	28,091,810	25,323,736
I. G. Farbenindustrie (Germany)	24,894,263	28,193,000

* Du Pont's General Motors investment accounted for \$42,939,452 of the 1929 profit, leaving \$35,232,278 of strictly chemical earnings. All the companies listed above, however, also included profits on investments.



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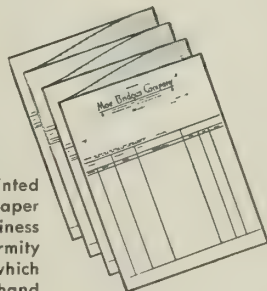
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Note on Cuban Revolution

BE IT in Calcutta after dinner or at Cowes the night after a last race, you must at some time or other offer Havana cigars. They and champagne are luxuries as necessary to an occasion as gavel and robe are to a judge. They are instantly recognizable, like the face of a king; one is familiar with them yet one respects them.

• • •

The two negroes strolling along the street are workers in a cigar factory. They were, of course, sure to be that or workers in a sugar cane field. A cockfight might have detained them as might the ball game which these have eschewed. They are paid by piece, not by day or week, so whether or no they go to the factory they are acting according to choice and it is pleasant. At the factory their deft brown fingers will smooth tobacco leaves, twirl amazingly, somehow fashion Cuban cigars. It is monotonous work and they know it, and to pass the time they choose one of their members, pay him from their own money to read to them. He starts with the newspapers. Then it is magazines or a novel, often Victor Hugo. Thus have their Cuban fathers before them worked and thus they once believed their Cuban sons would work after them. But somebody in the United States invented a machine.

Cuba is too pleasant an island for an industrial revolution. And yet since somebody in the United States did invent a cigar-making machine and since a good half of Cuba's working population is engaged in the making of cigars by hand, a revolution of some kind was inevitable. Cuba's, bloodless like England's, was no less bitter. There were meetings in the unions and shaking of fists and scowls in the factories in the mornings. There were no strikes, because striking would have made no sense. If the worker by hand went on strike he was merely helping the machine. This much anybody could apprehend, though when the first machines entered Cuba nobody knew what they would do, and nobody seemed to care. Only when the first were installed and the cigars rolled out, one after another, one after another, did the people realize. The unions, outraged and complaining, went to their municipal officers and they, anxious to please, placed a prohibitive tax on importation of all cigar-making machinery. This was

all very well, but the Cuban Congress had to point out that it was not within the authority of the municipalities to tax the importation of machinery into Cuba from the United States. Having delivered itself of this opinion, the Congress relapsed into silence, the unions lost their first skirmish, and anybody who wanted to could import into Cuba a cigar machine.

When two people battle, it is often a third factor which determines the issue. When the battle is industrial, there is nearly always a third factor, and the third factor is nearly always the public. The Cuban battle inevitably went into the hands of the public and as inevitably became social and epicurean. The Congress *had* decreed that machine-made cigars must so state on the band (a reservation now being fought by machine men). No one in Cuba, therefore, could smoke a machine-made cigar and not know it. The epicures, anyhow, would tell you that machine-made cigars are instantly recognizable, that they are packed too evenly or too tightly and hence lose their moisture . . . It became the mark of the knowing smoker not to smoke anything other than the handmade cigar. This epicurean boycott might have had effect and won the battle for the unions were Cuba the greatest consumer of its own cigars or even the greatest manufacturer of cigars made of Cuban tobaccos. But Cuba is neither of these. And in the United States the machines were fast monopolizing the process of manufacture. In Cuba it became evident that the handmade cigar was destined to no brilliant industrial future, that its niche in the world was among its esoteric luxuries, that the hand-manufacturer ironically must maintain the desirability of his product by the very same quality which insures the fact that it will never make very much money: its rarity.

To a degree, therefore, the Cuban unions won their battle. The prestige of the handmade cigar is still assured. Of Cuba's many cigar factories today only one, the Larranaga, fifth largest, uses machines and it does not use them exclusively. But if George Washington Hill should persuade the world that even that great luxury, the Havana handmade cigar, is better and more sanitary when made by machine—well, on that day, the picturesque Cuban will have lost finally and forever.

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In other words, the technique of the Master Salesman is the technique of the New-Type Movie. It presents instantly understandable ideas in picture form in a way so that when they are flashed on a screen before a buyer they travel one after the other, like freight cars going into a tunnel, through his eyes to his brain.

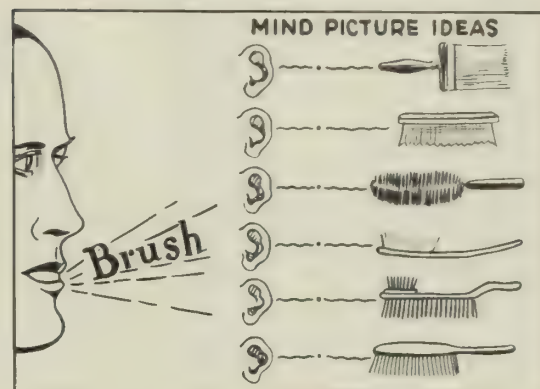
Thus, the one quick way to a buyer's brain...the way that does not confuse...the *EYE-WAY*...is easily and surely gained by this step-by-step, confidence-building pictures-in-motion method.

New-Type Movie Developed By Pathéscope

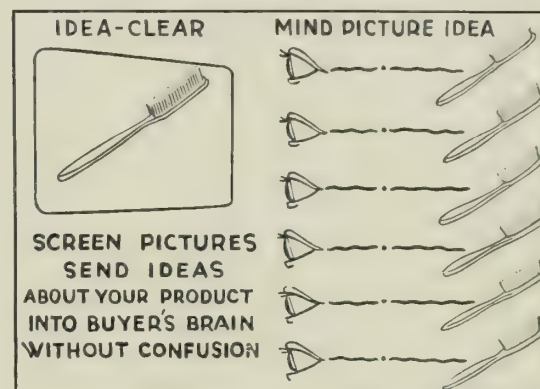
Pathéscope offers you a "star" movie that not only presents your product to buyers in the same manner that your star salesman has developed from years of

NOTE COUPON BELOW

Complete Information about How You Can Use Business Movies to Increase Sales, Cut Traveling Expenses—Sent without Charge for Coupon



EAR-WAY is Confusing



EYE-WAY is Clear

Business Movies Save Time, Money Get Interviews For Salesmen Now

A salesman meets a buyer. The salesman sets out to "sell". The buyer, to keep from being sold. Result—Conflict.

Antagonism removed, selling is easy. Simple to do this way.

Focus the buyer's attention on a "third party"...a movie projector. Let him see a New-Type Movie that gives your selling story up to the point of actually talking terms and prices with perfection never before possible.

Thus, by getting and holding the buyer's favorable attention, your salesman is able to start off on the right foot when he begins to present your sales proposition. First call sales increase—time saved. Travelling expenses drop.

And remember—buyers are glad to see the man with movies. Seeing is believing. They'd rather look than listen.

experience, but with the clearness of photography, the forcefulness of logic, the persuasiveness of the action in demonstrations, and the glamour of showmanship.

A Complete Professional Service

Pathéscope is equipped to plan and produce your New-Type Selling Movie from scenario to finished film. Directors, trained in the specialized problems of business movie-making, work closely with clients at every step.

The cost of a film is moderate. We would be pleased to plan a scenario for you and submit an estimate. No obligation, of course.

SEND NOW FOR COMPLETE INFORMATION FREE

THE PATHÉSCOPE CO. OF AMERICA, INC.
35 West 42nd St., New York

Kindly send me complete information about the new-type business movie. No obligation, of course.

Name.....

Company.....

Street.....

City..... State.....

THE PATHÉSCOPE CO. OF AMERICA, Inc.
Producers and Distributors of Business Movies: Sound, Silent and Still Picture Films



"Nor cast one longing
lingering look behind"

IT is love that dictates the writing of a will and the purchase of life insurance. By these means provision is made for the comfort and material well being of those who remain to remember and to live on. And it is love that makes provision for the final resting place of the departed, safe from all external change within the protecting walls of the

GALION CRYPTORIUM

THE UNDER-GROUND MAUSOLEUM

No vain regrets or futile self-reproach haunt the minds of those who have provided this final tribute of devotion, for this is the ultimate of protection and of beauty, replacing the crude horror of other methods. Neither water nor chemical elements nor living organisms can prevail against the security of Cryptorium walls of Armco Ingot Iron or imperishable bronze. That which is laid away in beauty remains unchanged by any external cause through the revolving years.

Hundreds of thousands of loving hearts bear witness to the solace that rewards Cryptorium emplacement. Leading funeral directors everywhere are prepared to explain this service and to supply it. The cost is altogether moderate.

Write for leaflet 5.

THE GALION METALLIC VAULT CO.
Department F.M., Galion, Ohio



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THE luxurious Island Estate or the simple Island Camp is becoming increasingly desirable because of its absolute privacy.

We offer, at an exceedingly reasonable price, 400 acres of Butler's Island in Lake Champlain, a delightful property with wonderful scenery, unsurpassed views and excellent fishing. A mile from the mainland and only a few miles to Canada by water. Excellent Terrain for an 18-hole golf course.

This property, due to its natural beauty and adaptability to extensive landscaping, can be made into a paradise either with or without the spending of large sums of money.

If interested in property in northern Vermont near the Canadian border, consult us.

CORLISS REALTY, Inc.
St. Albans, Vermont



Save with Steel/

Standardization Simplification Concentration

in All American Steel Desks
and Filing Equipment to us
as manufacturers means—

1. Lower Costs
2. Easier Financing
3. Economical Purchasing
4. No "Seasonal" Operations
5. Increased Turnover
6. Lower Production Costs

and to you as users
means—

1. Better Value for Money
2. Better Quality
3. Prompt Deliveries
4. Lower Maintenance Cost
5. Simplified Purchasing
6. Protection Against Unscrupulous Traders
7. Matchup and Interchangeability of Equipment

In Steel Office Equipment—

STEEL DESKS
STEEL FILING CABINETS
STEEL CUPBOARDS
FILING SUPPLIES

These Three Terms Are
As One:

Browne-Morse—
All-American—
Greatest Dollar Value

Write for interesting booklet
on Standardization of Man-
ufacturing, Distributing and
Using.

BROWNE-MORSE CO., Muskegon, Mich.

JOHN HANCOCK SERIES

Did you read what John K. Barnes re- cently said in *World's Work* about Building a Fortune?

HE said that if one has dependents, the first step is to take out sufficient life insurance for their support. This is the first step towards creating an estate and the only way in which the completion of the estate can be insured against the great uncertainty of life.

With life insurance provided, said Mr. Barnes, a savings bank account for emergencies, and a home bought, a man can then devote his attention to creating an investment estate with his further savings.

This is the sound advice of an experienced business man. Let us inform you about laying the foundations of an estate immediately through life insurance, or protecting an estate already formed, by this means.

Send for our booklet,
"THIS MATTER OF SUCCESS."

INQUIRY BUREAU

John Hancock
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS

Fr. Over Sixty-Seven Years in Business



This beautiful "Lincraft" Post-and-Rail Fence—11 ft. rails, 65 cents each; posts 95 cents and \$1.00 each

Send for "The Book of Fences"

describing Lincraft Rustic Fences, as installed on some of America's most beautiful estates and suburban properties. The Lincraft Line includes Post-and-Rail, English Hurdle and Woven Fences, both hand and machine, sturdily constructed of seasoned, weather-resisting woods. A Lincraft Fence requires no painting, and age only adds to its beauty. It is economical in first cost, installation and up-keep.

**LINCRAFT
RUSTIC FENCES**

NEW JERSEY FENCE COMPANY
34 LOGAN AVE. BURLINGTON, N. J.



A Personal Invitation to Hotel Hollenden

TAKE pleasure in extending to the readers of "Fortune" a most cordial personal invitation to make The Hotel Hollenden their home when in Cleveland. Located in the heart of Cleveland's business and financial district, The Hollenden, one of the distinguished hotels of the country, offers in grateful combination, homelike comfort, luxurious surroundings, an unexcelled cuisine and an atmosphere of smartness and reasonable and uniform rates.

The famous Crystal Dining Room is a brilliant and delightful place to dine.

The Hollenden Coffee Shop is modern to the last word, with fast counter and table service for the busy man and woman.

Sincerely yours,

Theo. De Witt
Vice Pres. & Gen. Mgr.

In Cleveland-it's The
HOLLENDEN

THEO. DE WITT
Vice Pres. and Gen. Mgr.

Ah! A BIRD SANCTUARY

Birds add untold interest and pleasure to any grounds or estate. Learn how to attract only beneficial song birds who thank you not only with cheery songs, but by destroying harmful insects, moths and mosquitoes. A Martin colony, for instance, will keep your premises free from mosquitoes and other flying insect pests.

JOSEPH H. DODSON, America's foremost bird authority, has supervised the building of bird sanctuaries for prominent people like Henry Ford, John D. Rockefeller, Thomas Edison, Harvey Firestone, Drs. Mayo and others as well as country clubs such as Westchester Biltmore, Olympia Fields, Onwentsia, etc.



Joseph H. Dodson

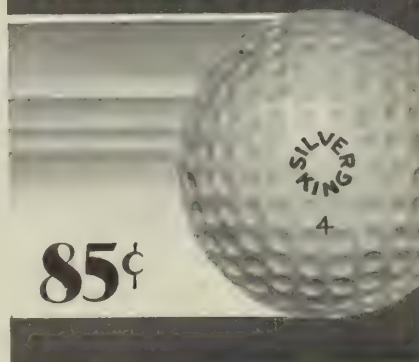
He will be glad to hear from any home owner interested in helping preserve America's song birds and to confer personally regarding the construction of a sanctuary or the proper location of bird houses on your property. Even a small garden can be made a haven for our beautiful birds. Write Mr. Dodson today and learn how to attract birds to your premises this season.

JOSEPH H. DODSON, INC.
239 Harrison St., Kankakee, Ill.

"Bird Lodge"

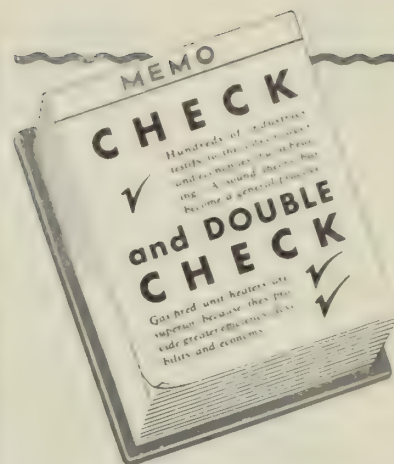
A Book Will Be Sent to Those Interested
"Your Bird Friends and How to Win Them."

Silver King
THE KING O' THEM ALL



85¢

You may be hooking, you may be slicing, your putting may be as erratic as a left-handed earthquake—but if you are playing the Silver King you can be dead certain it isn't the fault of the ball.



Gas is the logical, efficient, flexible fuel for industrial heating. Humphrey Gas Unit Heaters provide instant, controllable heat . . . on when you want it, off when you don't . . . eliminate coal, smoke, dirt, central heating plants, licensed firemen and actually pay for themselves in increased economy and efficiency. Inquiries invited. Write for catalog today!

GENERAL GAS LIGHT CO.
KALAMAZOO, MICHIGAN
New York Pittsburgh Cleveland San Francisco

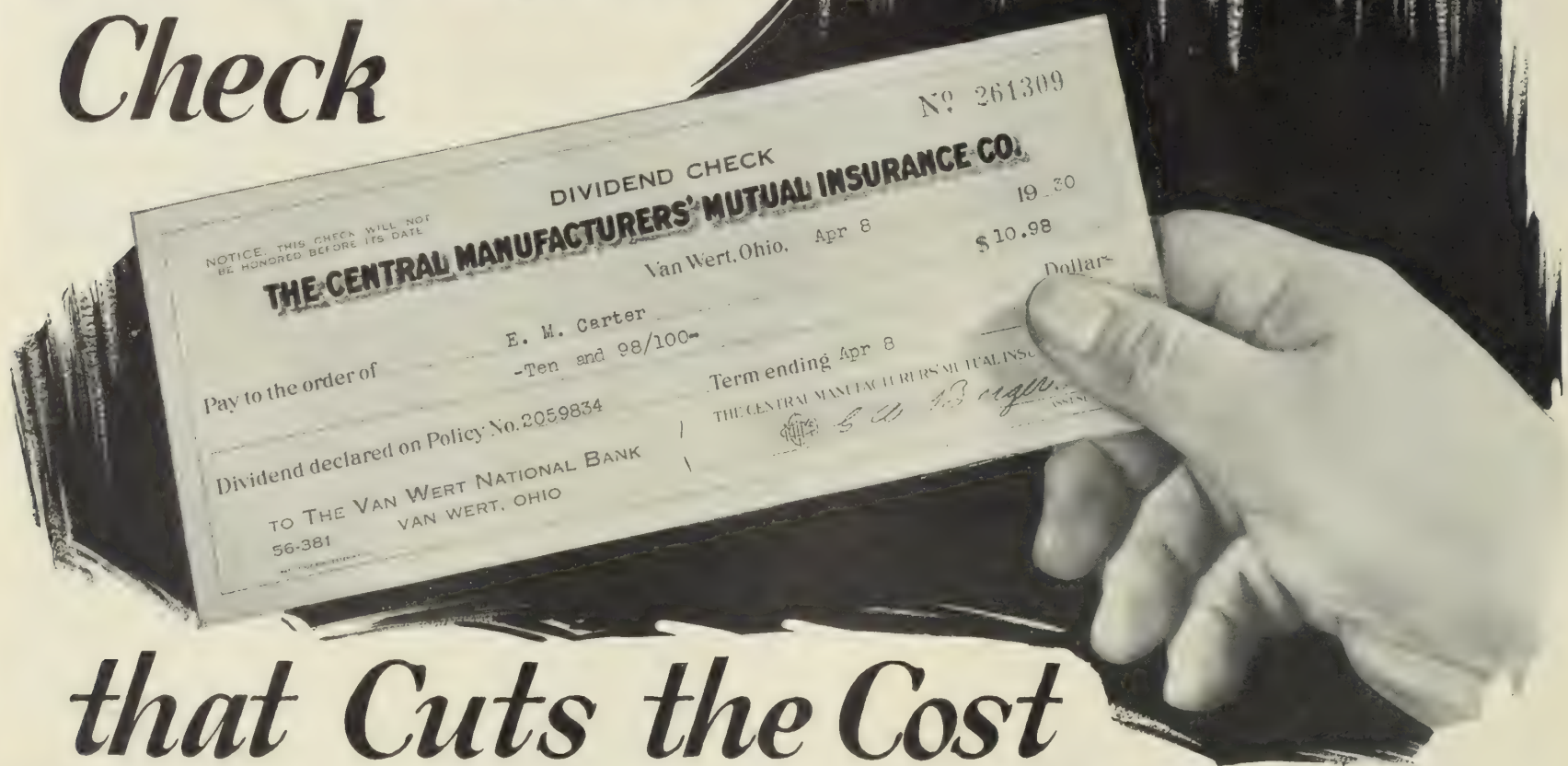


The
Humphrey
Gas UNIT HEATER



A typical Humphrey Gas Unit Heater installation for a Chicago grocer. Here a single heater provides ample heat for the store without taking up valuable wall or floor space. Every type of building and business can be efficiently heated with Humphrey Gas Unit Heaters.

The Dividend Check



that Cuts the Cost of Your Insurance

Dividend checks are always welcome and doubly so when they mean a substantial reduction in insurance cost. When you buy your insurance, cost is, and should be, secondary to the vital consideration of quality in the protection you secure. But, when you know that the protection offered is absolutely 100% in value, then it becomes only sound business judgment to consider the cost-advantage of a dividend of 30%.

The CENTRAL is a *mutual* company of unquestioned stability. For over half a century, it has offered real protection in its policies, with a reputation for fair adjustments and prompt payment of losses. Conservative management from the earliest days has realized a substantial dividend to reduce insurance cost. For the last nine years, CENTRAL'S dividend checks have been figured at 30% of the premium paid.

For Fire, Automobile, Tornado or Aircraft Insurance, CENTRAL policies command the interest of every careful buyer. All policies written through local CENTRAL agents. Full information, with name of nearest representative, on request.

CENTRAL'S
DIVIDEND
SINCE 1921
HAS BEEN
30%

Organized
1876

The **CENTRAL**

*A Friendly
Company*

MANUFACTURERS MUTUAL INSURANCE COMPANY
VAN WERT, OHIO

FIRE, AUTOMOBILE AND TORNADO INSURANCE FOR SELECT RISKS

